

# *NatQuery*

## Version 5.x Release Notes

|   |    |
|---|----|
| Overview.....   | 3  |
| Critical / Important Upgrade Notes.....                                     | 4  |
| Upgrading To 4.2.x (or above) From Versions Earlier than 4.2.x.....         | 4  |
| Upgrading From NatQuery 3.x.x to 4.2.x (or above) .....                     | 4  |
| Upgrading From NatQuery 2.x.x to 4.2.x (or above) .....                     | 5  |
| Summary of Changes for Release 5.0.12.....                                  | 6  |
| Correction: Runtime Error 5 – Generate NATCDC Objects for Single File.....  | 6  |
| Correction: Runtime Error 5 – Generate NATCDC Objects for Single File.....  | 6  |
| Correction: Binary Field Handling in Numeric Field Analysis (NAT0011) ..... | 6  |
| Enhancement: Integration to SQL Server and Retain ADABAS Field Names .....  | 6  |
| Enhancement: SQL Server Table/Field Names Longer than 32 Characters.....    | 7  |
| Summary of Changes for Release 5.0.11 .....                                 | 8  |
| Correction: Oracle Handling of Time (T) Fields .....                        | 8  |
| Correction: Handling of Numeric Fields into Oracle and SQL Server.....      | 8  |
| Summary of Changes for Release 5.0.10.....                                  | 9  |
| Correction: SQL Create Table Definitions With NATCDCSP .....                | 9  |
| Correction: CFD or DSX Definitions With NATCDCSP .....                      | 9  |
| Correction: Numeric Field Analysis .....                                    | 9  |
| Correction: Oracle Extract Integration Error SP2-0027 .....                 | 10 |
| Correction: RDBMS Integration - SQL Long Line Errors .....                  | 10 |
| Enhancement: Internal File Tag Character Changed.....                       | 10 |
| Summary of Changes for Release 5.0.9.....                                   | 11 |
| Correction: NatCDC / NatCDCSP Integration with Oracle .....                 | 11 |
| Correction: Edits Tightened for DDM changes with Pre-Existing Queries ..... | 11 |
| Enhancement: NatCDC Reporting Enhancements .....                            | 11 |
| Enhancement: NatCDC Default Handling with Zero Suppression.....             | 12 |
| Summary of Changes for Release 5.0.8.....                                   | 13 |
| Correction: Retrieving Scheduled Task Output in Z/OS Environments.....      | 13 |
| Summary of Changes for Release 5.0.7.....                                   | 14 |
| Correction: NatQuery Scheduled Tasks with Natural Security .....            | 14 |
| Summary of Changes for Release 5.0.6.....                                   | 15 |
| Correction: Scheduled Tasks in Mainframe Environments .....                 | 15 |
| Correction: NatQuery 5.0.5 and Download to XML issue .....                  | 15 |
| Enhancement: Scheduled Tasks and Time Differences.....                      | 15 |
| Enhancement: Query Save with Change to Summary Process Handling.....        | 16 |
| Summary of Changes for Release 5.0.5.....                                   | 17 |
| Correction: Date / Timestamp Handling with Summary Processing.....          | 17 |

|  |    |
|--|----|
| Correction: NatQuery Initialization across Time Zones .....              | 17 |
| Correction: FTP Errors result in Runtime Error .....                     | 17 |
| Enhancement: User Warning Message with Filter on Flatten .....           | 17 |
| Enhancement: Color Changes on Check Server Window .....                  | 19 |
| Enhancement: Identical Suppress Processing when Flattening .....         | 19 |
| Enhancement: Concatenate / Flatten Fields Window (Recurring Fields)..... | 19 |
| Enhancement: Support for ADAULD / ADADCU on Open Systems .....           | 19 |
| Summary of Changes for Release 5.0.4.....                                | 21 |
| Correction: CFD Generation and Generate NATCDC Objects function.....     | 21 |
| Correction: Data Model Display .....                                     | 21 |
| Enhancement: Single Pass Summary Processing .....                        | 21 |
| Enhancement: Ability to Handle Multiple Standard FTP Commands.....       | 22 |
| Summary of Changes for Release 5.0.3.....                                | 23 |
| Enhancement: Processing Enhancements to Support NATCDCSP .....           | 23 |
| Summary of Changes for Release 5.0.2.....                                | 24 |
| Correction: NatCDC – JCL Substitution issue with BLKSIZE.....            | 24 |
| Correction: NatCDC – Error with the Generation of Parameter File .....   | 24 |
| Enhancements: Code Enhancements for Upgrading to .NET.....               | 25 |

## Overview

The purpose of this document is to alert the reader to new features and enhancements that comprise the version 5.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 5.x release(s).

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

## **Critical / Important Upgrade Notes**

The following are Critical or Important considerations when upgrading to 5.x release(s).

### **Upgrading To 4.2.x (or above) From Versions Earlier than 4.2.x**

Beginning with the 4.2.0 release of NatQuery, enhancements were added to allow for “Expanded Query Save”, which allowed for the execution options of the query to be saved with the query itself. Therefore, additional information is now stored with a Query Definition when a Query is saved in a 4.2.x or higher version – with this additional information not being expected in versions of NatQuery prior to 4.2.x.

This means queries that are saved in a 4.2.x or higher version of NatQuery will not be recognized in earlier versions.

If an organization needs to run multiple versions of NatQuery spanning NatQuery 4.2.x (or higher) and versions of NatQuery lower than 4.2.x, and these multiple versions will be used to save queries into the same network path – versions of NatQuery prior to 4.2.x will not be able to open / utilize Queries saved in 4.2.0 or higher.

An easy solution to this issue is to establish a new network directory for Queries that will be used by versions 4.2.x or higher; copy the contents of the existing Query directory into this new directory, and then set the Query Path on the 4.2.x and higher versions to use this directory.

### **Upgrading From NatQuery 3.x.x to 4.2.x (or above)**

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.

## **Upgrading From NatQuery 2.x.x to 4.2.x (or above)**

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 5.0.12

NatQuery 5.0.12 was released on April xxth, 2007 and contains the following Corrections and Enhancements.

### **Correction: Runtime Error 5 – Generate NATCDC Objects for Single File**

In certain situations where a default NATCDC profile did not exist and a new file was being handled and the file was specified to be a Component of a Multi-File Process, NatQuery could return a Runtime Error 5 – Invalid Procedure Call when it incorrectly attempted to edit the File Names.

NatQuery would produce the error and then recover from it, and then allow generation to be completed correctly – however the error should not have occurred.

NatQuery 5.0.12 corrects this issue, and prevents the error situation from occurring.

### **Correction: Runtime Error 5 – Generate NATCDC Objects for Single File**

When the Generate NatCDC Objects for single file function was used with a NatQuery License Key value of all ones along with a valid NatCDC License Key (meaning that the customer was not intending to use or purchase NatQuery but was intending to use or purchase NatCDC), a Runtime Error 53 – File Not Found would be encountered when generation was attempted.

This issue has been corrected with the 5.0.12 release of NatQuery.

### **Correction: Binary Field Handling in Numeric Field Analysis (NAT0011)**

When NatQuery was instructed to perform a Numeric Field Analysis on a file that contained a Binary field, the generated Natural program could return a NAT0011 due to how the generated Natural was determining if the Binary Value was zero or not.

This issue has been corrected with the 5.0.12 release of NatQuery.

### **Enhancement: Integration to SQL Server and Retain ADABAS Field Names**

As a result of a Change Enhancement (CE) request, both NatQuery and NatCDC / NatCDCSP generation has been enhanced to allow for hyphenated field names to be retained when moving these field's and the field's data value into SQL Server.

On the Send to Server function window, as well as the Generate NATCDC Objects for Single File function window, a new frame control has been added Convert ADABAS Field Names, with this frame control contain two radio buttons – one button labeled as Yes and the other labeled as

No. The Yes and No radio button will only become available if RDBMS Integration is selected, and the RDBMS type is SQL Server (I.E. – this option is not currently available for Oracle).

If the Yes option is selected, then NatQuery and NatCDC RDBMS generation will convert all hypens in File names and Field names to be underscores when the receiving tables and receiving columns are defined to SQL Server.

If the No option is selected, then NatQuery and NatCDC RDBMS generation will not convert hypens in File Names and Field names to underscores when receiving tables and receiving columns are defined to SQL Server. The exception to this conversion will be that PE Group names, as well as the Primary Key for these PE Group names will not have the hypens converted to underscores when the receiving tables are defined: However these names can still be converted manually. A future CE will look to handle these current exception.

### **Enhancement: SQL Server Table/Field Names Longer than 32 Characters**

In previous versions of NatQuery (and the front end to NatCDC), an edit was imposed on the RDBMS integration that limited field (column) names and file (table) names to be 32 characters or less.

While this edit WAS appropriate for RDBMS integration to Oracle – this edit was inappropriate to SQL Server, where column names and tables names can be up 128 characters long (SQL Serv 2000).

This edit has therefore been removed when a SQL Server integration has be specified.

## **Summary of Changes for Release 5.0.11**

NatQuery 5.0.11 was released on March 27th, 2007 and contains the following Corrections and Enhancements.

### **Correction: Oracle Handling of Time (T) Fields**

When integrating Time (T) fields from ADABAS into Oracle, the definition of the T field was previously defined into Oracle using a column definition of “HH:MI:SS”.

This definition did not properly handle the 24 hour time period being passed from ADABAS, resulting in Oracle error ORA-01849 when handling times that reflected hour 13 and above.

With the release of NatQuery 5.0.11, the definition of a T field into Oracle will use the designation of “HH24:MI:SS” so that Oracle will properly handle the 24 hour time period coming from ADABAS.

### **Correction: Handling of Numeric Fields into Oracle and SQL Server**

When handling fields that were numeric and which also contained decimal positions, NatQuery was improperly defining the receiving column in the RDBMS target such that the receiving column was not defined with a scalar to contain the decimals values.

This situation therefore caused errors such as “ORA-01722: invalid number” when NatQuery attempted to integrate data into the RDBMS target.

This situation has been resolved with the release of NatQuery 5.0.11.



## Summary of Changes for Release 5.0.10

NatQuery 5.0.10 was released on March 12th, 2007 and contains the following Corrections and Enhancements.

### **Correction: SQL Create Table Definitions With NATCDCSP**

Due to the differences in a NATCDC process versus a NATCDCSP process, the PLOG Header output by each of these processes is slightly different.

In an earlier release of NatQuery version 5.x, functionality that correctly defined the PLOG Header to both Oracle and SQL Server was inadvertently “lost”.

This functionality has been restored with NatQuery version 5.0.10, such that SQL Create Table is correctly defined to match the output of NATCDCSP processing.

### **Correction: CFD or DSX Definitions With NATCDCSP**

Due to the differences in a NATCDC process versus a NATCDCSP process, the PLOG Header output by each of these processes is slightly different.

In an earlier release of NatQuery version 5.x, functionality that correctly defined the PLOG Header to CFD or DSX files was inadvertently “lost”.

This functionality has been restored with NatQuery version 5.0.10, such that the PLOG Header is correctly defined in the requested format (CFD or DSX) to match the output of NATCDCSP processing.

### **Correction: Numeric Field Analysis**

In previous versions of NatQuery two issues were reported with the Numeric Field Analysis function.

The first issue has to do with NatQuery failing to allow for a single numeric field to be “toggled” from being included or excluded from analysis by clicking on the field row.

The second issue is a Runtime Error that can occur when using the Numeric Field Analysis function in situations where previous analysis was done on the same file.

Both issues have been corrected with the release of NatQuery 5.0.10.

**Correction: Oracle Extract Integration Error SP2-0027**

When using NatQuery to integrate to Oracle and in situations where the option “Remove empty records” is selected and the file contained many fields, when the generated SQL script was executed against Oracle an error SP2-0027 could occur.

This error was due to the generation of a SQL statement WHERE clause which was in excess of Oracle’s token limit of 2499 characters.

This issue has been corrected with the 5.0.10 release of NatQuery, such that a WHERE clause that exceeds 2499 characters will be split across multiple lines.

**Correction: RDBMS Integration - SQL Long Line Errors**

In a similar situation to the problem Correction outlined immediately above, NatQuery could generate SQL statements that exceeded a reasonable line length. In many cases this could cause syntax or execution errors when the generated SQL was executed.

Beginning with NatQuery 5.0.10, NatQuery now examines SQL statements being generated for excessive length, and for those SQL statements which are likely to significantly exceed 200 characters, the statement will be split out in as close to 200 character chunks as is possible.

**Enhancement: Internal File Tag Character Changed**

When NatQuery handles processes such as gathering Descriptor Statistics or Occurrence Information – the NatQuery generated processes previously used the Exclamation Point (“!”) as a “Tag” character to designate the file being handled.

In certain international settings, this Tag character would be incorrectly handled by FTP translation tables, such that the exclamation point would be changed to another character, and NatQuery did not expect to handle another character as a Tag other than the exclamation point. This then led to unpredictable results and in some cases erroneous error messages (such as from the Descriptor Statistics function when trying to import generated Descriptor Statistics).

Beginning with the release of NatQuery 5.0.10, the use of the exclamation point in Tags built by server processes has been replaced with the use of the designated NatQuery Variable Prefix Character, as set through the Natural Server Information function.

## Summary of Changes for Release 5.0.9

NatQuery 5.0.9 was released on February 23rd, 2007 and contains the following Corrections and Enhancements.

### **Correction: NatCDC / NatCDCSP Integration with Oracle**

In specific situations involving the integration of NatCDC / NatCDCSP output into Oracle, the FMT file may incorrectly reference the data file, resulting in a syntax error 350 for the SQL-Loader.

The error is caused by the lack of a trailing single quote following the data file name on the second line of the FMT file.

The manual work-around to this error is to add a trailing single quote after the file name; however this issue has been resolved within the release of NatQuery 5.0.9.

### **Correction: Edits Tightened for DDM changes with Pre-Existing Queries**

In specific situations involving DDMs being changed when Queries had been created against the previous version of these DDMs – NatQuery could generate Natural programs that contained syntax errors.

For example: A DDM references a field defined as a PE-GROUP field, a query is created that references that PE-GROUP field and this query is then saved. The DDM is then changed to reflect that the field is a MU field in the PE-GROUP; the work is performed to insure that this DDM becomes verified and the query is then opened and generated into an Extract Program.

In previous versions of NatQuery – the fact that the number of dimensions for the given field had changed was not recognized by NatQuery – leading to syntax errors in the resultant Natural program when this Natural program was executed.

This situation has been corrected with the release of NatQuery 5.0.9, meaning that NatQuery is now sensitive to dimensional references being different between a query and its changed DDM, with edits now being presented that prevent the syntax errors from occurring.

### **Enhancement: NatCDC Reporting Enhancements**

Previously when the Generate NatCDC Objects for Single File was used, a report was created that detailed most of the options that were selected by the user for Generation.

With the release of NatQuery 5.0.9, this reporting has been enhanced to report all of the generation options that a user may select.

### **Enhancement: NatCDC Default Handling with Zero Suppression**

In previous version of NatQuery, and when using the Generate NatCDC Objects for Single File function – NatQuery would initially default to have the value of **Suppress leading zeros in numeric output** default to being selected (meaning that leading zeros would be suppressed in NatCDC / NatCDCSP output).

This default often produced results that would conflict with SQL Loaders such as Oracle, and NatWorks has therefore changed the default of this option to NOT be selected.

This change will only effect the creation of new specifications when no Default-NatCDC-File-Profile exists and a given file has never been handled before through the **Generate NatCDC Objects for Single File** function. If an existing NatCDC specification exists for a file then this specification must be manually changed, or if a Default-NatCDC-File-Profile exists with this option selected, then this profile should be manually changed.

## Summary of Changes for Release 5.0.8

NatQuery 5.0.8 was released on January 15th, 2007 and contains the following Corrections and Enhancements.

### **Correction: Retrieving Scheduled Task Output in Z/OS Environments**

Against specific Z/OS or MVS systems, the retrieval of Scheduled Task output could fail with an FTP error of **12003 – The FTP remote directory/filename appears to be invalid**, even though the Scheduled Task ran correctly.

This issue was caused by the configuration of the FTP server, whereby the server will assume that FTP GET operations will automatically have the User ID of the initiating user prefixed to a named dataset, UNLESS that dataset name is bounded by single quotes.

With the release of NatQuery 5.0.8; NatQuery will now internally bound a Scheduled Task dataset name with single quotes as required when used against Z/OS systems.

## Summary of Changes for Release 5.0.7

NatQuery 5.0.7 was released on January 5th, 2007 and contains the following Corrections and Enhancements.

### **Correction: NatQuery Scheduled Tasks with Natural Security**

For sites using Natural Security, NatQuery and NQSubmit could encounter problems when handling the insertion of Natural Security User Ids and Natural Security Passwords into Scheduled Task JCL or Scripts.

Specifically, NatQuery and NQSubmit could fail to handle these Natural Security fields, resulting in failed executions.

This issue has been corrected with the release of NatQuery 5.0.7 and NQSubmit 1.0.2.

## Summary of Changes for Release 5.0.6

NatQuery 5.0.6 was released on January 2nd, 2007 and contains the following Corrections and Enhancements.

### **Correction: Scheduled Tasks in Mainframe Environments**

When NatQuery's new ability to integrate to the Windows Task Scheduler was used against mainframe environments, in most situations this would not operate as designed; however it would operate as designed when used against UNIX or Windows servers.

This situation has been corrected with the 5.0.6 release of NatQuery, and the 1.0.1 release of NQSubmit.exe. The 1.0.1 version of NQSubmit is a standalone execution (exe.) distributed / included within the NatQuery 5.0.6 install, this exe. is called by the Windows Task Scheduler.

To implement NatQuery's integration with the Windows Task Scheduler, either a complete install is required, which will install new versions of NatQuery and NQSubmit, or the new executable files for these two programs must be placed into the NatQuery installation directory (usually C:/Program Files/NatQuery/) overlaying the files of the same name.

### **Correction: NatQuery 5.0.5 and Download to XML issue**

With the release of NatQuery 5.0.5, a bug was introduced that would prevent the selection of **Download to XML File** as an **Extract Type** on either the **Send to Server** or **List Program** windows when the designated **Server Type** was UNIX or Windows.

This bug has been corrected with the release of NatQuery 5.0.6.

### **Enhancement: Scheduled Tasks and Time Differences**

When NatQuery integrates to the Windows Task Scheduler, NatQuery assigned a "Submission Date" based on the date and time of the workstation that NatQuery was executed on.

When a Scheduled Task was then fired off by the Windows Scheduler and was subsequently executed on the Server, it received a "Completion Date" based on the date and time of the server that the NatQuery request executed against.

If by chance the PC clock was slightly ahead of the Server's Clock, and the Scheduled Task ran quickly enough, the situation could arise where the "Completion Date" (and time) was shown to be LESS THAN the "Submission Date" (and time), thus making the logic behind the **Check Server for Update** button of the **Check Server** function believe that the task had not yet run - even though it really had.

This situation has now been addressed. Specifically, the following logic will apply as NatQuery reacts to the user clicking the **Check Server for Update** button on the **Check Server** window:

- If the “Completion Date” (and time) are greater than the “Submission Date” (and time) of a Scheduled Task, then NatQuery will automatically update the status of the scheduled request to show as “DONE”, thereby allowing the user to select this and retrieve the associated file in a normal fashion, without interpretation by NatQuery or the User.
- If the “Completion Date” (and time) plus 10 Minutes is greater than the “Submission Date” (and time) of a Scheduled Task, then as NatQuery builds the status of Tasks on the **Check Server** window in reaction to a user clicking **Check Server For Update**, NatQuery will produce a message that will display both dates (and times), the message will inform the user of the consequence of a possible time variation, and the message will passively *suggest* that the user consider the task as being “DONE”. In response, the user can accept this recommendation (in which case the Scheduled Task will display as “DONE” when the **Check Server For Update** request completes), or can disregard this recommendation (in which case the Scheduled Task will remain as “PENDING” when the **Check Server for Update** request completes).
- If neither of the above conditions apply but a Schedule Task shows as “PENDING” and NatQuery’s automated examination of the user’s remote log shows that the last action of this Scheduled Task is “DONE”, then regardless of date (and time) NatQuery will produce a message that will display both dates and times, the message will inform the user of a possible time variation, and then the message will specifically question the user as to how to treat the situation. Should this message occur, it will be left up to the user’s discretion as to whether they consider the task as being “DONE” or not. In response, the user can accept this recommendation (in which case the Scheduled Task will display as “DONE”), or can disregard this recommendation (in which case the Scheduled Task will remain as PENDING”).

**Note:** In this specific situation if the user indicates the Scheduled Task as being “DONE”, then they do so realizing that the retrievable data may very well be from a previous execution of the Scheduled Task and not the output of the still PENDING Scheduled Task.

### **Enhancement: Query Save with Change to Summary Process Handling**

When Summary Processing was being used for a query and this query was opened and then changed only to the extent that the type of Summary Processing was changed (Single Pass Summary versus Two Pass Summary), then NatQuery would process the query correctly but would not detect that the query specification had been changed.

This situation has been corrected with the release of NatQuery 5.0.6.



## Summary of Changes for Release 5.0.5

NatQuery 5.0.5 was released on December 1, 2006 and contains the following Corrections and Enhancements.

### **Correction: Date / Timestamp Handling with Summary Processing**

When handling a Summary Process that involved a Date (format D) or Timestamp (format T) field, the Natural program generated could contain a syntax error that would prevent execution.

This situation has been corrected with the 5.0.5 release of NatQuery.

### **Correction: NatQuery Initialization across Time Zones**

In situations where a networked server is used to hold a NatQuery Environment Configuration that is physically located in a Time Zone that is different from the workstation upon which NatQuery resides, NatQuery could fail to start on this workstation. In this situation, NatQuery would fail with an error message indicating that the NatQuery Environment is un-verified or does not exist, when the environment reacts as verified if accessed by a workstation within the same environment.

This situation has been corrected with the 5.0.5 release of NatQuery.

### **Correction: FTP Errors result in Runtime Error**

With the release of NatQuery version 5.x, a bug was inadvertently introduced in the error handling of specific FTP errors such that when a legitimate FTP error occurs, NatQuery would fail to properly interpret and intercept the error as was done in the past, and instead NatQuery would return a Runtime Error.

We regret the introduction of this error, and are pleased to report that it has been corrected with the 5.0.5 release.

### **Enhancement: User Warning Message with Filter on Flatten**

For quite some time, NatQuery has supported the ability to handle ADABAS recurring data elements such as Multi-Valued and Periodic-Group fields by allowing these fields to either be Flattened or Concatenated when they are output. Concatenating was the “traditional” approach to outputting ADABAS records, a process where 1 ADABAS record being read would result in 1 extract record being written, with any recurring fields strung out.

Flattening on the other hand allowed for the normalization of an ADABAS record, where 1 ADABAS record could result in  $x$  number of extract records being written, with  $x$  being the

value of the highest C\* (Occurrence Count) from all recurring fields being flattened. Each record written would be output such that the values of all non-recurring or concatenated fields were repeated for each flattened record, along with the value of each single element of a flattened field and a corresponding occurrence number.

Subsequent to offering support for Flattening, NatWorks provided the ability to allow a user to “Filter When Flattening”, meaning that if NatQuery Selection Logic in a query referenced recurring fields, then if the user chose to Flatten those fields: NatQuery would ask whether or not the Flattening process should filter out (drop) any flattened record which did not meet the criteria of the Selection Logic in regards to those fields.

While this enhancement was desirable, the use of this capability introduced a risk whereby records which met the overall selection criteria would be excluded from output due to the fact the unique recurring field values that allowed the record to be selected physically resided in different occurrence entries.

For example, consider the following Selection Logic:

```
FILE01.ADDRESS-LINE(All) = "454 South Main"  
And  
FILE01.CURR-CODE(All) = "USA"
```

In reviewing the above selection logic, consider the situation where the following record exists in FILE01:

1. The ADDRESS-LINE criteria was met in occurrence number **1** of all values of ADDRESS-LINE,
2. The CURR-CODE criteria was met in occurrence number **2** of all values of CURR-CODE,
3. The user requested that both recurring field be flattened, and
4. The user indicated that “Filter on Flatten” should be used against both fields.

Given the criteria, the record in question would not be output since both Selection Logic elements were not in the same physical occurrence (occurrence 1 vs. occurrence 2).

With the release of NatQuery 5.0.5, the above situation will now result in a Warning Message to the user which warns of the risk that is present when Selection Criteria references multiple recurring fields, these recurring fields are designated to be Flattened, and the Filter on Flatten is used. In response to the Warning Message, a user can now either continue with the query or can cancel the query for remedial action.

**Enhancement: Color Changes on Check Server Window**

With the release of NatQuery 5.0.5, Yellow will now be used in the Check Server window to accentuate the background of the selected request.

**Enhancement: Identical Suppress Processing when Flattening**

In current versions of NatQuery, when data is being Flattened by user request, field values for elements that were not being Flattened would simply be repeated across flattened records.

When this data was being presented in Excel however, and calculations were then performed with Excel across columns of non-flattened data – the calculations would be skewed by the values being repeated. A Change Enhancement was therefore created that would allow a user to have the option of Suppressing non-Flattened values beyond the first flattened occurrence being output.

With the release of NatQuery 5.0.5, and in situations where the user has specified one or more fields to be Flattened and there exists other fields not being Flattened – the user will be presented with a new window that will allow non-Flattened fields to be Identically Suppressed across multiple Flattened Records. The new Handle Identical Suppression When Flattening window allows for non-flattened fields to be selectively Suppressed with the further capability to suppress Only Numeric fields, All Fields, or No Fields.

**Enhancement: Concatenate / Flatten Fields Window (Recurring Fields)**

With the release of NatQuery 5.0.5 the Concatenate / Flatten Fields Window has been changed to use a Grid Control versus the previous use of a Text Box to handle the designation of Flatten versus Concatenation on Recurring Fields.

The basic function of this window stays the same; however the interface was upgraded to be more compatible with other NatQuery windows & standards.

**Enhancement: Support for ADAULD / ADADCU on Open Systems**

With the release of NatQuery 5.0.5, NatQuery now supports extraction against Open Systems using the ADAULD and ADADCU utilities.

Previously, the support for ADAULD (and ADACMP Decompress Infile) were limited to only supporting ADABAS on mainframes.

With the release of 5.0.5, NatQuery now supports the automated use of ADAULD and ADADCU against Open Systems (UNIX, Linux or Windows), either by unloading from ADABAS or from a Backup tape (created by ADABCK).

It should be noted that in mainframe environments, the ADCMP utility can be used to unload data directly from an online ADABAS file using the DECOMPRESS INFILE parameter. As there is no equivalent parameter for ADADCU in Open Systems – this feature is not offered or supported.

## Summary of Changes for Release 5.0.4

NatQuery 5.0.4 (General Availability Release) was released on October 13th, 2006 and contains the following Corrections and Enhancements.

### **Correction: CFD Generation and Generate NATCDC Objects function**

When using the **Generate NATCDC Objects** function (older function name) / **Generate NATCDC Objects for Single File** function (new function name with Version 5) and attempting to generate a COBOL File Definition (CFD), NatQuery could return a Runtime Error 6, Subscript out of range.

This situation is corrected with the release of NatQuery version 5.0.4.

### **Correction: Data Model Display**

In specific situations involving the use of NatQuery to load data directly into Oracle or SQL Server, NatQuery could return Runtime Errors when the Data Model window was being presented and intense field manipulation was being performed.

This situation is corrected with the release of NatQuery version 5.0.4.

### **Enhancement: Single Pass Summary Processing**

With the release of NatQuery 5.0.4, NatQuery now supports the ability to create a Summary extract in one process as opposed to two separate processes as was required previously.

In order to support this feature, a new JCL / Script template needs to be created, with this template being named **Production Summary Single Pass**. An example of this template can be obtained from an installation of NatQuery 5.0.4, or can be obtained from NatWorks.

To utilize this new feature, the **Summary Processing** option is selected on the **Send to Server Options** window. This action will subsequently invoke the **Summary Processing** window which allows the user to specify the “Sort Order” of the fields involved. On the bottom of the Summary Processing window is a new frame called **Processing Option**, which offers the choice of **Single-Job Process** or **Two-Step Job Process**. If the **Single-Job Process** option is used, the new Single-Pass Summary Processing will be invoked; if **Two-Step Job Process** is used then the previous Summary Processing will be invoked.

As is true with the previous Summary Processing – the “trick” to using Summary Processing primarily involves the user selecting (or otherwise ordering) the fields to be output so that they have the same sequence as the order of the expected SORT.

For example, assume that we wish to provide a summary extract of Vehicle MAKES by Employee CITY. In this case, the field CITY would be selected or ordered to be the first field

output, with the field MAKE selected or ordered to be the second field output. On the **Summary Processing** window, the field MAKE would then be selected as the **Primary Summarization Field** (with the option to **Provide a Count for Summarized Field**), with the field CITY being selected to **Summarize Within**. When executed, this would then create the requested Summary Output.

### **Enhancement: Ability to Handle Multiple Standard FTP Commands**

With the release of NatQuery 5.0.4, NatQuery now has the ability to pass multiple commands to an FTP Server at the time an FTP connection is made.

This ability is implemented through the **FTP Command Strings** tab of the **Administer Server Connection Information** function, which is accessed from the NatQuery desktop by clicking on the **Administer** drop-down menu, then clicking **Environment Configuration**, then clicking **Server Connection Information** and then clicking **Server Information**.

In the **FTP General Command Strings** frame, there are now four fields into which hard-coded **FTP General Command Strings** can be entered, with any non-blank **FTP General Command String** being automatically passed by NatQuery to the FTP server immediately following the automatic login process (which provides the FTP user name and Password).

Previously, it was only allowed to have one (1) **FTP General Command String**; with the release of NatQuery 5.0.4 this has been expanded to four (4).

## **Summary of Changes for Release 5.0.3**

NatQuery 5.0.3 (BETA) was released on August 15th, 2006 and contains the following Corrections and Enhancements.

### **Enhancement: Processing Enhancements to Support NATCDCSP**

The 5.0.3 release of NatQuery contains coding enhancements to better support the processing of the new NatCDC Single-Pass Multi-File processing. This primarily centers on better reporting on generated objects, and more consistent handling of generated objects.

## Summary of Changes for Release 5.0.2

NatQuery 5.0.2 (BETA) was released on August 3rd, 2006 and contains the following Corrections and Enhancements.

### **Correction: NatCDC – JCL Substitution issue with BLKSIZE**

When using the **Generate NatCDC Objects for Single File**, and also specifying that the process to be generated was a **Stand Alone Process**, NatQuery would incorrectly handle some of the dynamic substitutions dealing with **&&CDC-I-BLKSIZE** when the execution JCL was generated.

Specifically, substitutions could be made that contained null values, resulting in JCL that was not syntactically correct and would not execute as intended.

This situation is corrected with the 5.0.2 release of NatQuery.

### **Correction: NatCDC – Error with the Generation of Parameter File**

When using the **Generate NatCDC Objects for Single File**, and when also specifying that the process to be generated was a **Stand Alone Process**, NatQuery would incorrectly generate a parameter statement into the generated NatCDC parameter file that the NATCDC 3.2.1 was not expecting.

This situation would result in NATCDC 3.2.1 believing that it had received an invalid parameter file, and would stop execution with a parameter error.

The new parameter statement of “WHF=” is intended for future use with the new NATCDCSP (Multi-File, Single Pass Processor), and is compatible with release 4.1.1 (and above) of NATCDCSP.

The work around for this situation for users of NatQuery 5.0.1 who did not wish to upgrade to NatQuery 5.0.2 but wish to use NatQuery 5.0.1 to generate NatCDC Stand Alone Processes is to edit the generated NatCDC Parameter file and remove the 8<sup>th</sup> statement, which should be:

WHF=XXX, or  
WHF=X X X

NatQuery 5.0.2 has been changed so that it will only generate the WHF parameter when a Component of Multi-File Process is selected; if a Stand Alone Process is selected then the WHF parameter will not be generated.



**Enhancements: Code Enhancements for Upgrading to .NET**

With the release of NatQuery 5.0.2, numerous internal code changes were made to base NatQuery Visual Basic 6 code.

These changes are / were necessary so that NatQuery could eventually be upgraded to Microsoft .NET in the future.

Extensive testing has been done to insure that none of these changes affect normal NatQuery execution / operation – however NatQuery 5.0.2 is considered a BETA release due to these changes.