Core Highways Release Notes v4.1.0.1

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1 Document Control

1.1 Author

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1.2 Document Summary

This document provides a description of the changes in this release and information about how these changes may impact on an Exor installation.

1.3 Document History

Document History			
Revision	Date	By	Description
1.0	13 November 2009	R Coupe	First Edition
1.1	17th November	R Coupe	Added Log 723431
1.2	19th November	R Coupe	Added new SM logs
1.3	19th November	R Coupe	Fixed SM Version
1.4	19th November	R Coupe	Fixed SM Version
1.5	19th November	R Coupe	Added Task 0108766
1.7	3rd December	R Coupe	Post-testing updates
1.8	8th December	R Coupe	Added Task 0108874

1.4 Reference documents

None

1.5 Distribution

Exor Customers, Partners and Staff

1.6 Quality Assurance

Document Details	
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1.0	

2 Introduction

This document highlights the key changes to the exor Core Highways database following the release of **Core Highways v4.1.0.1.** It is specifically targeted at users and system administrators of the exor systems. Changes in the core database functionality have the potential to have wide impact across all exor applications and it is important that these changes are understood. However, many of the functions of **exor Core Highways** are extremely technical in nature and this document is aimed at those with some degree of technical knowledge and not at end users.

It is not intended to be a full system description but a guide to indicate what changes have been made, why they have been made and the potential failings if this upgrade is not applied.

This release is available as an upgrade from release 4.1.0.1. of **exor Core Highways**.

After reading through this document, should you have any need for training or consultancy then please contact your **exor** account manager. If these changes are considered important for your current release and this is incompatible with this patch release then please contact **exor support**.

This patch is intended to be used in conjunction with the recently improved Spatial Manager product at build version 6684 of Spatial Manager.

The purpose of this patch release is to provide some reliability improvements over 4.1.0.0. Several key fixes were provided to release 4.0.5.4 but were too late for the freeze date of 4.1.0.0. Several were highlighted as known issues in the 4.1.0.0 release notes. These issues were catalogued from a variety of sources such as system tests on 4.1.0.0 and known issues from previous releases including previously supplied fixes as well as independent testing of the 4.1.0.1 patch and build 6684 of Spatial Manager.

3 Log No. Summary

This chapter summarises all Software Bugs and Changes that have been made in this release.

3.1 ECDM Log 722009 Bulk Merge Failure

Failure of the execution of a bulk merge query at a past historic date.
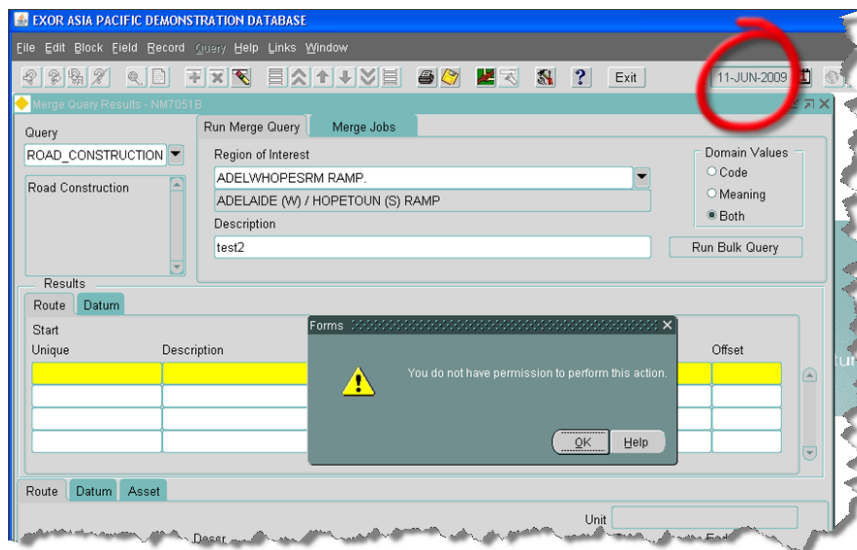
This issue was caused by a failure of the installation procedures of past versions. The installation procedure should create a context through execution of the file **<exor_base>\nm3\admin\ctx\nm_sql_context.sql** and although the file was included in the release, its execution was seen to be missing. Corrective action at version 4.0.5.4 is available as fix 35. Release 4.1.0.1 will create the context. Administrators of systems at 4.1.0.0 may wish to execute the file or install version 4.1.0.1.

3.2 Task 0108687 – Primary Key Violation on creation of Asset

Primary key violation on creation of an asset was seen to be due to an extraneous trigger on the view NM_INV_ITEMS. The trigger had originally been built to cast table differences which have now been absorbed into the product. It is now obsolete, performing nothing other than an insert into the base table. Unfortunately, on systems that include Traffic Manager a similar trigger is created to perform validation of traffic sections and count-sites. This trigger also performs inserts into the base table resulting in a primary key violation. The upgrade script of 4.1.0.1 includes the statement to drop the trigger NM_INV_ITEMS_INSTEAD_IU.

3.3 Task 0108681 - Displaying Partial Group Membership

Partial road group indicators were not displayed correctly in Spatial Manager as illustrated below.
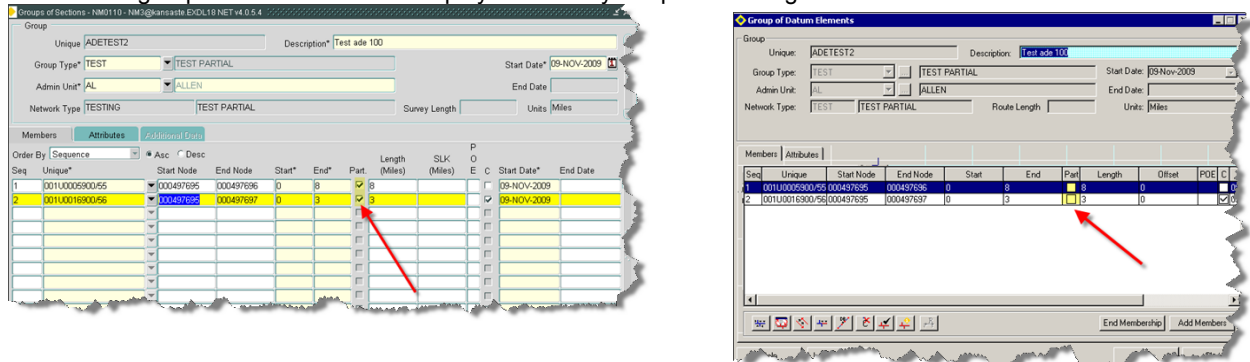
3.4 Task 0108660 Hierarchical Assets

When assets are set up with parent/child/grandchild AT relationships ' adding a second child asset causes error: NET-0106 ' Cannot locate asset records which are in a child AT relationship.'

This relates to three separate ecdm logs, namely 722948, 720091, 697651.

Code has been changed to allow more than one non-exclusive child assets (with exclusive Parent) with mandatory AT relationship.

3.5 ECDM Log 722941 - Derived asset TSTR fails

Derived asset failure with resultant error message - ORA-00904: "Q"."BEGIN_MP": invalid identifier: nm3eng_dynseg_util.populate_tmp_table(p_mrg_job_id=5683, p_inv_type=TSTR).

3.6 ECDM Log 723304 - Unable to create spatial element

Error in Spatial Manager when attempting to create a new network element whilst snapping to an orphaned node.
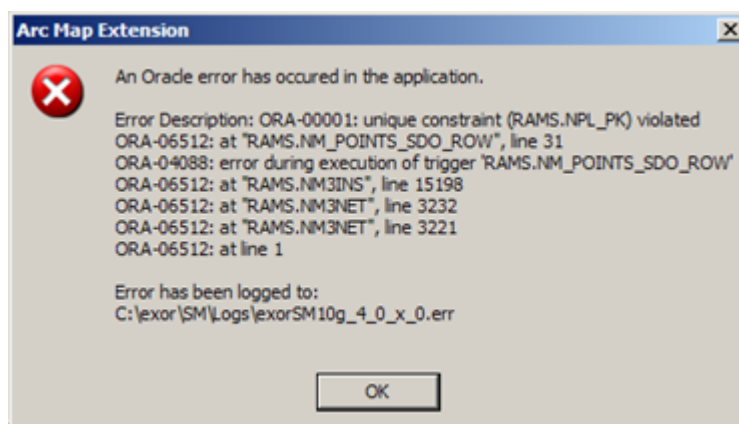
The solution is included in build 6680 or later.

3.7 ECDM Log 722923 - GOS and splitting element

Network element modules such as NM0200, NM0110 and NM0105 are called after the conclusion of the split, merge replace and other similar modules. The called form is called after server changes are posted but not committed. The resultant called form should indicate on exit/query that the changes are not committed and allow the user to save or cancel the changes. Also, the called modules should detect that server changes are outstanding and allow the user to force a commit through the keys or toolbar.

3.8 ECDM Log 723234 – Negative Route Measures

The form nm0122 form has been corrected to allow negative route offsets. Negative values are handled just as positive; messages will be displayed should route offsets fail to translate to a datum reference. Other modules may have similar problems and a review is being conducted. This error also relates network extent creation in SM which is a current problem but is being considered for a future release.

3.9 ECDM Log 723017 - MQ returns invalid dates for 1950 and prior

The merge query results module displayed attribute data in an incorrect format and could convert 2-digit years incorrectly.

3.10 ECDM Log 723001 - Merge of Datums with Partial Groups

Merging two datums could result in multiple location records to model a contiguous network group member. This fix is also available as 4.0.2.2 Fix 8. This corruption is caused in rare circumstances with a specific configuration of the merge with specific cardinality and order/flip settings. The resultant two members for the same datum results in a unique key violation failure when using the partial road group in the assets on a route module (NM0560).

3.11 Task 0108592 – Merge Query Issue String buffer too small.
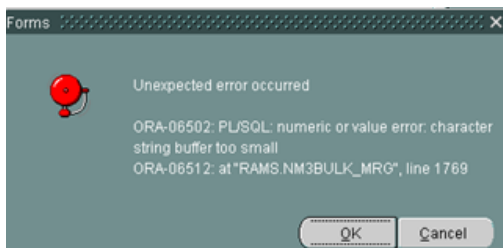
This issue is also fixed inside 4.0.5.4 Fix 36. It relates to ecdm logs 723109 and 722590.

3.12 Task 0108567 – Network groupings

As explained in previous release notes, the integrity of the database could be compromised through invalid data entry in the network groupings modules. This release includes an improved version of NM0004 Group Types module which will perform integrity checks on the group types and their components.

3.13 Task 0108565 – Locator Unpin Problem

A test had identified that when you unpin Locator and drag the left hand edge of the map to expand it, it will expand, but re-centring it results in the map disappearing off the right hand edge of the screen.

3.14 ECDM Log – 720290 – Admin Unit Security and Date Logic

This fix is also available as 4.0.5.4 Fix 29. Although the ecdm log relates to measures on routes, which related to customer data problems, the log also identifies the problem that when locating an asset at a past effective date, the admin unit security would fail to find details of recently created admin units on the same datum.

3.15 Task 0108559 – Highlight Colour in Spatial Manager

Functionality has been added to enable the user to set the selection highlight colour in Spatial Manager.

3.16 Task 0108558 – Redundant layer Creation Buttons

Forms to handle group types and asset types (NM0004 and NM0410) have had redundant buttons removed. The buttons were used as an old method of creating spatial layers.

3.17 ECDM Log 723068 – Locator Map measure tool failure

Also available as nm_4054_fix27, this fix allows the user to measure the length and area of lines drawn in locator on systems that are configured with a spatial co-ordinate system in units other than metres. The current display is returned in metres and the change to display the distance in the original map units will be considered in a future release.

3.18 ECDM Log 722085 - Error creating a defect on asset

The menu tool to create defects at the centroid of a complex, compound polygon was failing as a result of the server code making a corruption to the memory-resident geometry prior to the call to evaluate the centroid. This is also available as 4.0.5.4 Fix 27. The corruption only occurred when using some multi-part polygons and had no impact other than a failure to create the defect.

3.19 Task 0108516 – GRI0200 and PL/SQL numeric or value error

Changes to database fields in recent years had not been correctly followed through to generic core modules such as GRI0200. This module could fail with a PL/SQL numeric or value error depending on the size of data fields.
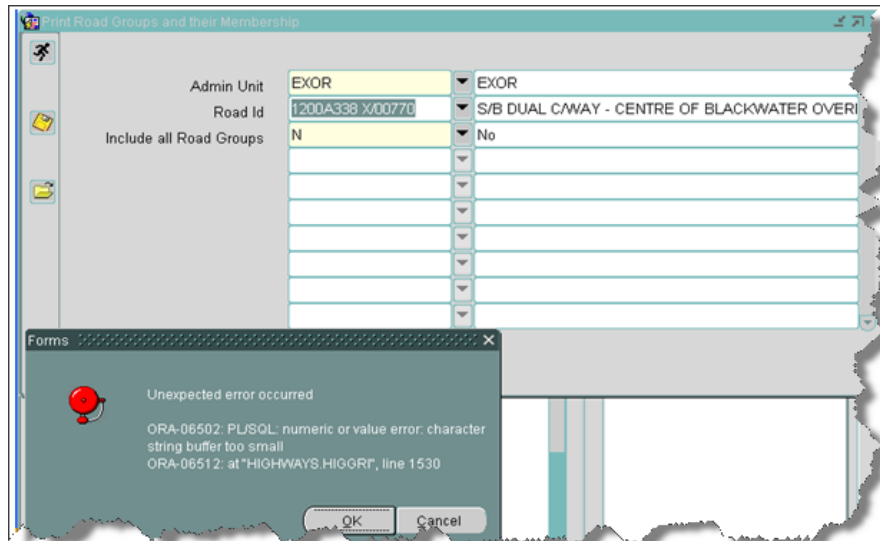
The module is required to work on a huge variety of data fields and now truncates descriptive text where appropriate.

3.20 ECDM Log 714261 - Error modifying colours in STP4400

The inability to set the colours of layers in the STP4400 module was due to the inability to call the colour-palette module HIG1811. The 4.1.0.1 release contains an upgrade script to create the module metadata to correct this problem. By creation of the HIG_MODULE and HIG_MODULE_ROLE record. The HIG_USER role is assigned to this module. If your site does not support the use of HIG_USER role contact support.
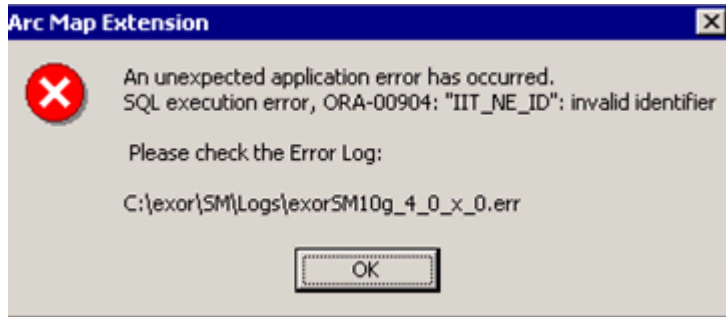
An error displayed as ""FRM-41391 Cannot find visual attribute: invalid ID" can be resolved by setting the Visual Attribute in Asset Domain screen (NM0301)"

3.21 ECDM Log 723431 – Error in snapping Defects to Road Network in Locator

The customer complained that Locator could not successfully snap a defect to the network. This particular problem if often due to faulty metadata, usually in the label column of the themes table. This was found to be the case and the data was repaired. However, the problem persisted and was seen to be in the nm3sdo.get_objects_in_buffer function and would result in cases where locator sub-select was not in use, where the theme-table and theme feature table were different and where the nth_feature_fk_column was null.
This is also included in 4.1.0.0 Fix 3.

3.22 Task 0108755 – Off-network Asset Attributes in SM

In cases where an off-network asset has been registered with no spatial history, the theme is configured such that the opening of the attributes form in Spatial Manager could fail with an ORA-00904 error as shown below.

Arc Map Extension

An unexpected application error has occurred.
SQL execution error, ORA-00904: "IIT_NE_ID": invalid identifier

Please check the Error Log:

C:\exor\SM\Logs\exorSM10g_4_0_x_0.err

OK

As a workaround it is recommended that the theme be registered with history such that a spatial, date-tracked join view is registered. The extraction of the ordered set of attributes into the form will be successful.

It is proposed that the join view is constructed irrespective of whether the spatial data should be date tracked in a later release.

3.23 ECDM Log 723610 - Display of USRN no in Datum Elements

Spatial Manager could display the USRN number in a scientific notation if the number was large.

3.24 ECDM Log 722924 – Resize Route Not Working

The resize route function has been disabled on some categories of route types. Route types that are deemed to be divided should not be resized in the way in which this code operates. Inside SM the resize route is also prevented on partial element routes – this had already been coded in the forms modules.

3.25 Task 010866 – Validation of Decimal Places on Asset Attributes

This task relates to two issues. The first is 723147and raises the issue that a falure arises during attempts to modify an asset attribute to a number of decimal places greater than that specified in the asset metamodel, In this case, the server validation should round the data. The second is 723575 and this relates to the same problem but driven from the IIT_X and IIT_Y asset attributes of an asset driven by its XY location. The customer in question had a format mask on the XY data and attempts to move/reshape the asset in Spatial Manager resulted in the validation failure. The fix is to prevent failure but allow rounding when the number has too many decimal places but the change also is required in the package that generates the spatial data to keep the oracle geometry data in sync with the asset XY attributes.

3.26 Task 0108833 - SM - X and Y attribute Values Rounded

This also relates to the decimal places formatting of asset attributes including those that drive XY location on assets. Spatial Manager allows the update of the X and Y values. These are now formatted correctly.

3.27 Task 0108836 – Unable to Create Datum Element in Spatial Manager

Under some scenarios of metadata, when the datum element unique key was not being auto-generated, SM would fail to create a datum element.

3.28 Task 0108874 – reshaped polygons or lines disappear or degenerate to a point

This relates to an ecdm log number 724017 which was raised after beta testing of a specific 4054 fix (Fix 37). This fix had been included in the original 4.1.0.1 release. A new fix to replace the obsolete fix 37 will be prepared and the same code added to the 4.1.0.1 release. Hence, in theory, this specific problem will nto be encountered outside of the original beta test environment from which it was raised. The fix was to ensure that the XY co-

ordinates of an asset are rounded in the IIT_X and IIT_Y columns according to the metamodel. This had a fault in that lines and polygons were also affected as well as the point assets. This has been corrected.

3.29 Task 0108887 - Get From Map not working at 4100

Further testing of modules in the 4.1.0.1 environment has shown that the get-from-map functions that are embedded into modules such as NSG010 and TMA1000 and DOC0150 failed to return and use the selected ordinates. This affected all modules where a single ordinate pair were expected. The package used behind the locator module has been changed to correct this problem. A further fix will be made available for users of 4.1.0.0 (4.1.0.0 Fix 4 – Task 0108889)

4 Known Issues

4.1 Creation of a user

The addition of a role against a user is no longer a mandatory part of the process of the user creation. The HIG_USER role should be granted to the subordinate user as this will pass on the privileges to access some system dictionary views that are executed inside the user-instantiation trigger. This role is also used to pass on access to the base forms modules such as the launchpad and fastpath.
On creation of the user, if the error/message "Public synonyms not available, you must create private synonyms for this user." Results, then this can mean that synonyms to the two packages (nm3user and nm3context) that are referenced from the instantiate user trigger are missing but it can also mean that the user cannot execute the procedure from the nm3context package due to missing privileges on some dictionary views.

4.2 Number formats in SM

The VB number format in the grid control used to handle asset and network attributes in Spatial Manager will not handle long format numbers. Free format attributes or those that allow a great many digits will be open to digit loss if numbers such as 1234567890123456789012.12 are entered.

4.3 Failure in creation of an off-network asset layer

The creation of an off-network asset layer can fail if the inventory view has not already been created. Please ensure that the inventory views are established prior to using the layer creation tool. Failure results in an unhandled exception as shown below.