

Kustom Impact Analyser

Predicting Kondor+ & K+TP Upgrade impacts on your custom code

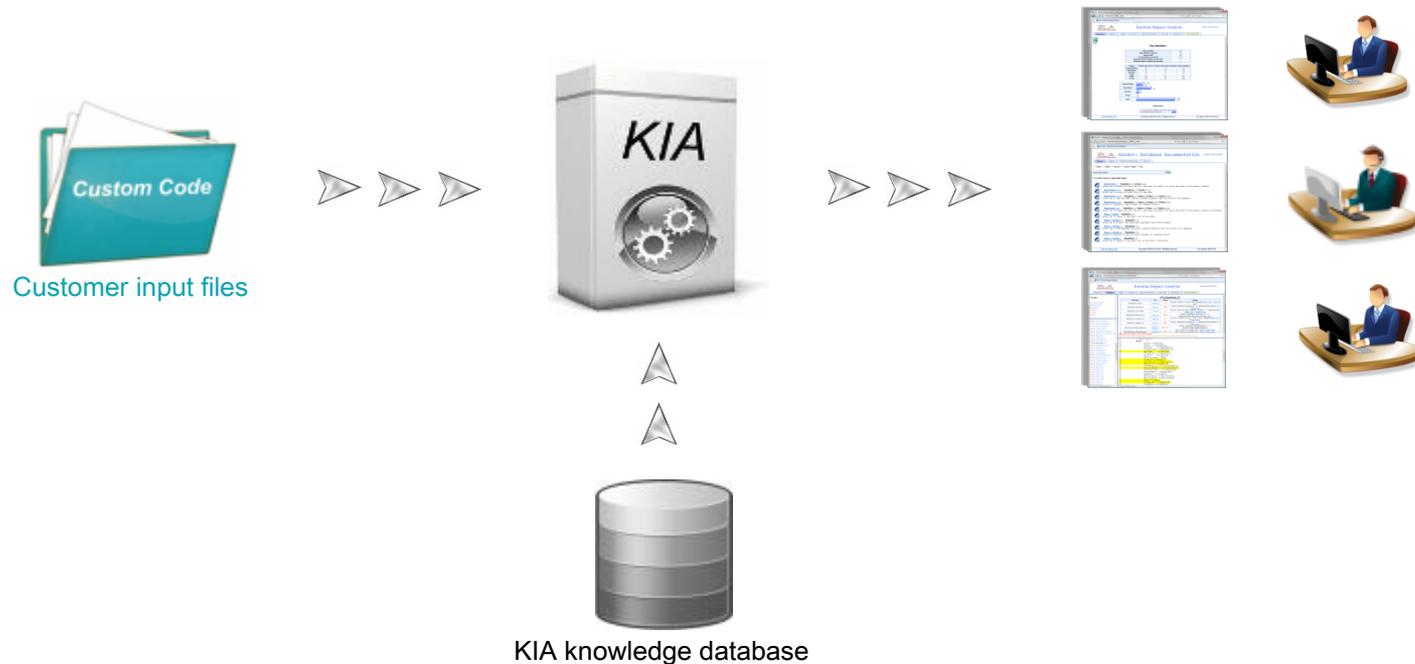


What is the Kustom Impact Analyser?

The KIA analyses your customized developments and helps you saving time and money when migrating Kondor+ or K+TP.

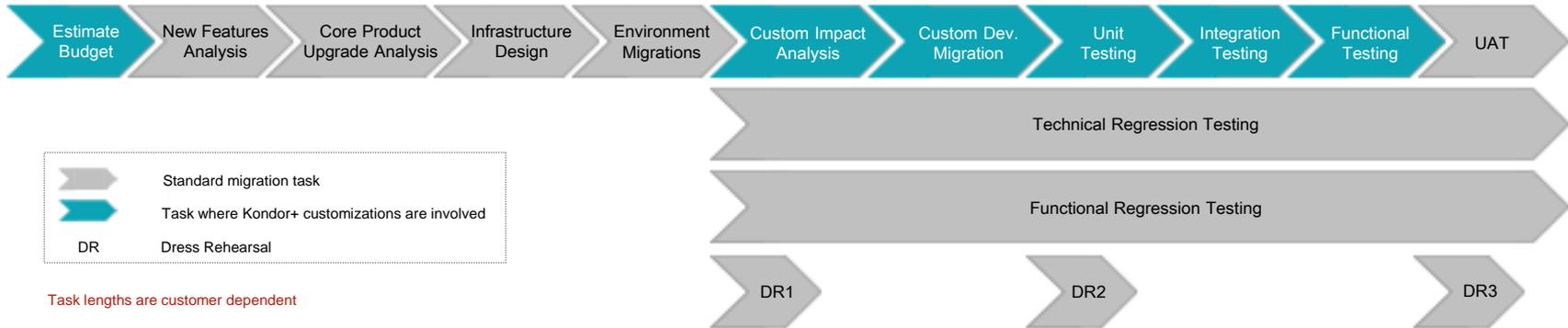
It generates a tailor made HTML report for the following audience:

- ❑ **Project Managers**
- ❑ **Business Analysts**
- ❑ **Developers**



Kondor+ 3.x Upgrade Project

A 3.X upgrade project may have new functionality as business drivers.
But preserving the company investment in the form of custom developments and interfaces is essential.



All together, an important part of the investment will be to estimate and migrate this custom code, in the following tasks:

- Estimate Budget
- Custom Impact analysis
- Custom Development Migration
- Testing phases (Unit, Integration and Functional)

Key to the project success is that the custom code migration is **exhaustive**.
The **speed** and **effectiveness** of the migration will determine an important part of the overall length of the upgrade.

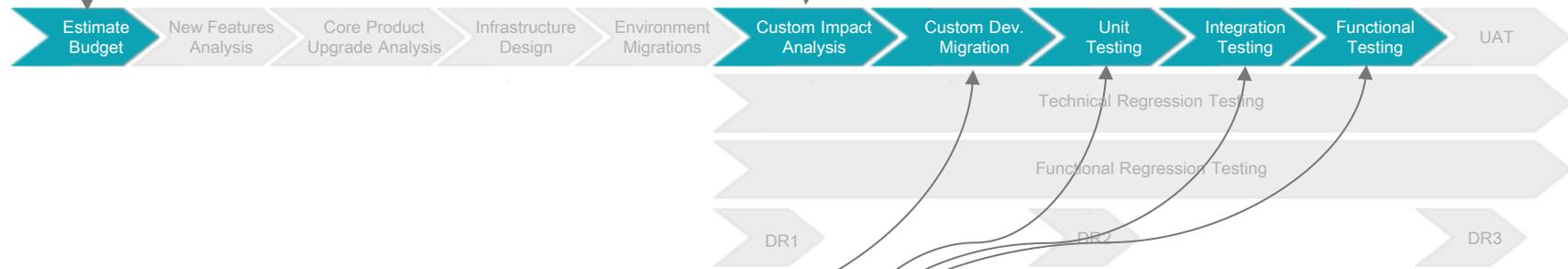
How KIA can help you migrating K+ or K+TP

Use standard project metrics?
Use sampling of code?

With KIA Generation of DB of impacts provide exact number of impacts
Use of KIA provides a finite metric of effort per module impacted

Analysis of the differences between the two K+ (or K+TP) versions at high level
Choice of fix methodology (i.e. all bonds or all Custom windows)
Identification of all impacts
Identification of change in both documentations at detail level
Identification of fixes to apply (new field name, change of choice,...)

With KIA Database of all changes between the two K+ versions
Creation of a report providing all the impacts
Link between impacts and enhanced change documentation



Walk thru all files with changes identified
Walk thru all changes within a file
Code change

With KIA The report of impacts facilitates the code change process
Linked documentation reduces fix error

Load each change in an upgraded K+
Check all interfaces input / output
Run all changes to validate exhaustively

With KIA Exhaustivity is guaranteed, only test what has changed!
Interface changes are checked as well
Re-run the KIA process to check everything is now compatible

KIA will impact all phases in a **qualitative** way, reducing risk, catching issues earlier. But also in a **quantitative** way, with accurate budget metrics and greatly reducing effort to identify, implement and validate changes required

Qualitative improvements

- ❑ Most upgrade projects overshoot on customization migration by 100%
- ❑ Except projects where prior analysis is equal to the migration phase!
- ❑ Items missed discovered at integration testing stage cost 5 times as much to fix
- ❑ Items missed discovered at Acceptance testing or later can delay the project, cost real money or create reputation risk

Quantitative improvements

	Manually	With KIA
Estimate number of changes and effort	40	2
Analyse differences between two K+ versions	40	0
Identify impacted modules	20	0
Identify changes to be made	80	10
Execute changes	40	10
	220	22

mandays

Sample CBA based on real migration experience.

The installation used the full range of Kondor+ asset classes (millions of trades).

Their customized development size was 3,000 SQL files (more than 2 millions of code lines).

The KIA **lowers** significantly project **risk** that could **double the project cost**.
And it pays itself by **dividing** at least **by 5** the project effort around your custom code and interface migration.

Kustom Impact Analyser

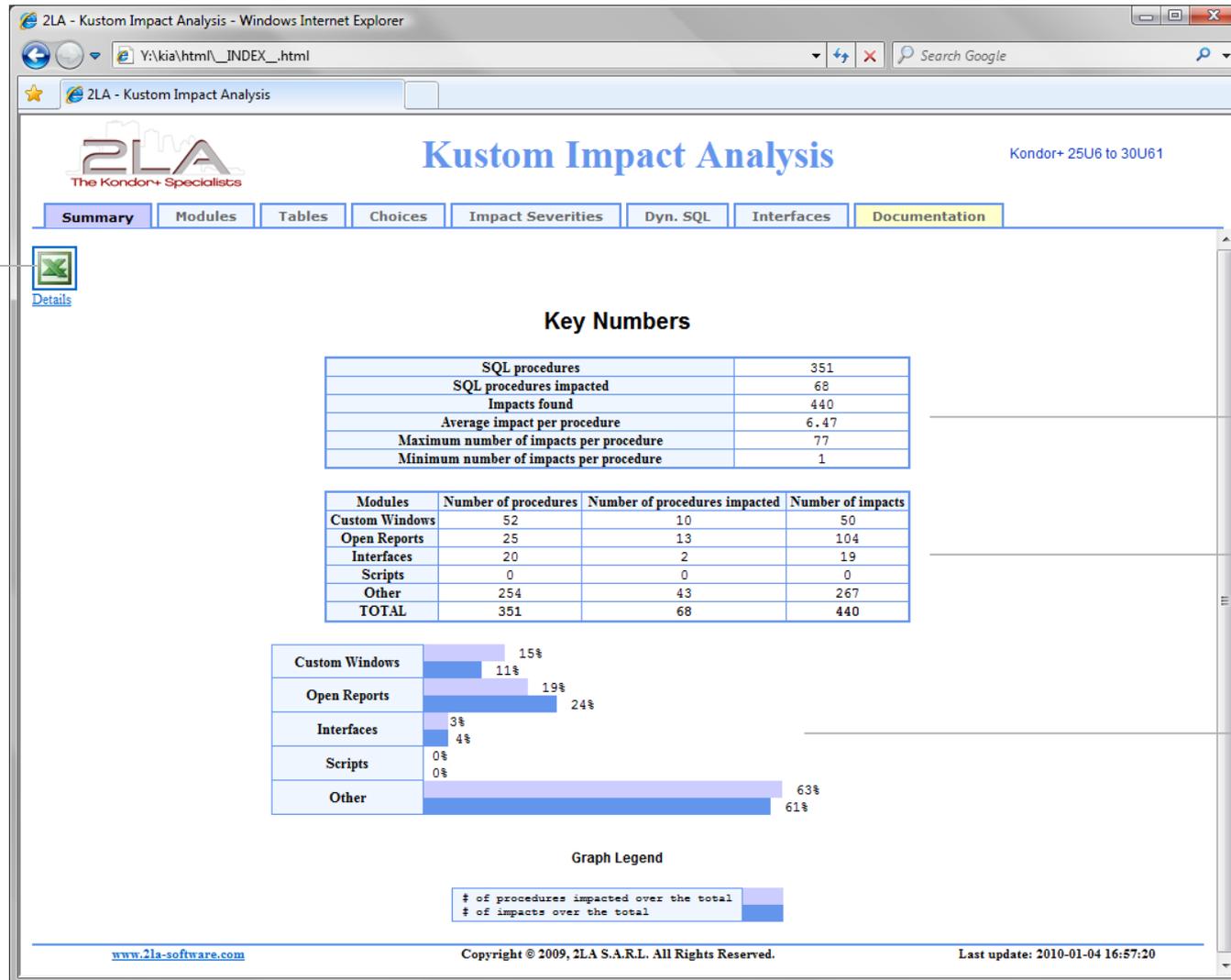
[Learn More...](#)

The Kustom Impact Analyser...

- ▣ Provides Metrics on your SQL code
 - ▣ Number of files or procedures impacted
 - ▣ Total number of impacts
 - ▣ Number of impacts per file or procedure
- ▣ Points out where and how your:
 - ▣ SQL source code should be amended
 - ▣ Import & Export interface files should be changed (*KplusFeed* and *XML* formats)
 - ▣ KSQL reports should be reviewed
- ▣ Tells where the impacts are in your source code (line number but also highlighted line)
- ▣ Provides the underlying Kondor+ database documentation explaining the changes
- ▣ Enables an exhaustive validation during the development migration lifecycle through several runs
- ▣ Eases the test cases writing as it points out where the issues are
 - ▣ In which Kondor+ modules: Custom Windows, Interfaces, Open Reports, etc.
 - ▣ Which instruments are impacted
 - ▣ What has to be changed
- ▣ Provides different views to navigate within the impact analysis (technical or functional approach)
- ▣ Allows to focus the test efforts on the development pieces where the changes were performed

KIA Change Metrics

Excel document containing all the details
(nb. of impacts per procedure, etc.)



- Statistics**
- Nb. of files processed
 - Nb. of impacted files
 - Nb. of impacts
 - Average nb. of impacts
 - Max. nb. of impacts
 - Min. nb. of impacts

Details per Kondor+ technical module

Graphical representation of these details

It shows what should be changed and how...

2LA - Kustom Impact Analysis - Windows Internet Explorer

Y:\kia\html\panels\modules\ModulesPanel.html

2LA - Kustom Impact Analysis

ZLA The Kondor+ Specialists **Kustom Impact Analysis** Kondor+ 25U6 to 30U61

Summary **Modules** Tables Choices Impact Severities Dyn. SQL Interfaces Documentation

Modules

- Custom Windows
- Open Reports
- Interfaces
- Scripts
- Other
- All
- K3S_LoansDeposit_Futur_CF
- K3S_MbsAbs_Tranches
- K3S_Options_BasketIndexes
- K3S_Options_Currency
- K3S_Options_Equity
- K3S_Options_FuturesCurrency
- K3S_Options_FuturesNonCurrency
- K3S_PaperDeals
- K3S_PaperDeals_CF
- K3S_PaperDeals_CF19
- K3S_RepoDeals_CF**
- K3S_SecurLoansDeals_CF
- K3S_SpotDeals
- K3S_SwapDeals_CF
- K3S_SwaptionDeals
- K3S_Warrants_BasketIndexes
- K3S_Warrants_Bonds
- K3S_Warrants_Currency
- K3S_Warrants_Equity
- K3S_rdProc_BY
- K3S_rdProc_FM
- K3S_rdProc_MY
- K3S_rdProc_SD
- K3S_rdProc_SY
- K3S_rdProc_WBY
- K3S_rdProc_WSY
- K3S_rdProc_Z
- K3S_rdProc_F

K3S_RepoDeals_CF

Reference	Line	Action	Change
RepoDeals.Basis	line 43	UPC	Choice [Basis]: values have changed[Table Doc] [Choice Doc]
RepoDeals.Bonds_Id	line 33	MOV	Moved: RepoDeals.Bonds_Id --> RepoSecuSched.Bonds_Id [Table Doc]
RepoDeals.DealType	line 29	UPC	Choice name has been changed: BuySell --> RepoDealType [Table Doc] [Choice Doc]
RepoDeals.Equities_Id	line 34	MOV	Moved: RepoDeals.Equities_Id --> RepoSecuSched.Equities_Id [Table Doc]
RepoDeals.Indexation	line 44	UPC	Choice [FixedFloating]: values have changed[Table Doc] [Choice Doc]
RepoDeals.Papers_Id	line 35	MOV	Moved: RepoDeals.Papers_Id --> RepoSecuSched.Papers_Id [Table Doc]
RepoDeals.WeightedAmount	line 37 line 65	MOV UPN	Moved: RepoDeals.WeightedAmount --> RepoSecuSched.WeightedAmount This field now accept Null value. [Table Doc]
RepoSchedule.RepoDeals_Id	line 60	UPN	This field now accept Null value. [Table Doc]

DEL: Deleted field - MOV: Moved - REN: Renamed
NEW: New field - UPD: Updated datatype - UPC: Updated Choice - UPN: Updated AllowNull flag - REV: Section to review

```

23      /* Deals Select */
24      SELECT
25          Source = @Strategy,
26          Status = D.DealStatus,
27          Deals_Id = D.RepoDeals_Id,
28          sourceInsID = D.RepoDeals_Id,
29          DealType = D.DealType,
30          Folders_Id = D.Folders_Id,
31          Cpty_Id = D.Cpty_Id,
32          Cpty_Id Issuer = null,
33          Bonds_Id = D.Bonds_Id,
34          Equities_Id = D.Equities_Id,
35          Papers_Id = D.Papers_Id,
36          Currencies_Id 1 = D.Currencies_Id,
37          WeightedAmount = D.WeightedAmount,
38          Countries_Id 1 = C.Countries_Id,
39          PaymentDate = S.PaymentDate,
40          CashFlow1 = S.CashFlow,
41          MaturityDate = D.MaturityDate,
42          MaturityRate = D.MaturityRate,
43          Basis = D.Basis,
44          Indexation = D.Indexation,
45          FixedRate = D.FixedRate.
    
```

Module Selection

Procedure Impacts

Procedure Selection

Procedure Source Code

...with the relevant documentation links...

2LA - Kustom Impact Analysis - Windows Internet Explorer

Y:\kia\html\panels\modules\ModulesPanel.html

2LA - Kustom Impact Analysis

Kustom Impact Analysis Kondor+ 25U6 to 30U61

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K3S_RepoDeals_CF

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RepoDeals.Bonds_Id	line 33	MOV	Moved: RepoDeals.Bonds_Id --> RepoSecuSched.Bonds_Id [Table Doc]
RepoDeals.DealType	line 29	UPC	Choice name has been changed: BuySell --> RepoDealType [Table Doc] [Choice Doc]
RepoDeals.Equities_Id	line 34	MOV	Moved: RepoDeals.Equities_Id --> RepoSecuSched.Equities_Id [Table Doc]
RepoDeals.Indexation	line 44	UPC	Choice [Indexation]: values have changed [Table Doc] [Choice Doc]
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```

23 /* Deals Select */
24 SELECT
25     Source = (
26     Status = (
27     Deals_Id
28     sourceInst
29     DealType
30     Folders_Id
31     Cpty_Id
32     Cpty_Id Is
33     Bonds_Id
34     Equities_
35     Papers_Id
36     Currencies
37     WeightedAm
38     Countries
39     PaymentDa
40     CashFlowI
41     MaturityDa
42     MaturityRa
43     Basis = D
44     Indexation
45     FixedRate
    
```

Click on the documentation links associated to each impact raised...

RepoDeals - Windows Internet Explorer

Y:\kia\html\documentation\data\tables\RepoDeals.html

RepoDeals

RepoDeals Money Market

Heading	Money Market
Display name	Repo Deals
Number of Fields	103
Comments	Allows you to capture repo (Repurchase Agreement) deals.

NOC: No Changes
 DEL: Deleted field - MOV: Moved - REN: Renamed
 NEW: New field - UPD: Updated datatype - UPC: Updated Choice - UPN: Updated AllowNull flag

Impact	25U6				30U61				Comments
	Table name	Field name	Datatype	Null	Table name	Field name	Datatype	Null	
MOV	RepoDeals	Accrued	float	Yes	RepoSecuSched	Accrued	float	Yes	Kondor+ automatically displays the bond when the bond name is calculated on the va is calculated by the night
NEW					RepoDeals	AdjustMaturityDate	choice	No	Indicates if the Maturity Date schedule
NEW					RepoDeals	Adjusted	choice	No	Indicates if the dates used payments are the the same as the is paid. Activated: roll conv calculation AND payment dates o determines the interes
MOV UPN	RepoDeals	Amount	float	No	RepoSecuSched	FaceAmount	float	Yes	Specifies the nominal value of s field is activated for bond de automatically when the Quantit the following formula: [Quantit bond]
UPC	RepoDeals	Basis	choice	No	RepoDeals	Basis	choice	No	Specifies a basis for the calc default, the money market ba displayed as defined in the Calc for the currency of the deal.
NOC	RepoDeals	BatchFlag	choice	No	RepoDeals	BatchFlag	choice	No	Flag used to optimize the trigge issued from batch
UPD UPN	RepoDeals	BlockNumber	int	Yes	RepoDeals	BlockNumber	numeric (20,0)	No	The block number of the deal is This only applies when the deal

...to get the full documentation details

...and a documentation search engine

2LA - Kustom Impact Analysis - Windows Internet Explorer

Y:\kia\html\panels\modules\ModulesPanel.html

2LA - Kustom Impact Analysis

Kustom Impact Analysis

Kondor+ 25U6 to 30U61

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RepoDeals.DealType	line 29	UPC	Choice name has been changed: BuySell --> RepoDealType
RepoDeals.Equities_Id	line 34	MOV	Moved: RepoSec
RepoDeals.Indexation	line 44	UPC	Choice [FixedFlo
RepoDeals.Papers_Id	line 35	MOV	Moved: RepoDeals
RepoDeals.WeightedAmount	line 37 line 65	MOV UPN	Moved: Rep This field: This field:
RepoSchedule.RepoDeals_Id	line 60	UPN	This field:

DEL: Deleted field - MOV: Moved - REN: Renamed
NEW: New field - UPD: Updated datatype - UPC: Updated Choice - UPN: Updated AllowNull flag - REV

```
23 /* Deals Select */
24 SELECT
25     Source = @Strategy,
26     Status = D.DealStatus,
27     Deals_Id = D.RepoDeals_Id,
28     sourceInsID = D.RepoDeals_Id,
29     DealType = D.DealType,
30     Folders_Id = D.Folders_Id,
31     Cpty_Id = D.Cpty_Id,
32     Cpty_Id Issuer = null,
33     Bonds_Id = D.Bonds_Id,
34     Equities_Id = D.Equities_Id,
35     Papers_Id = D.Papers_Id,
36     Currencies_Id 1 = D.Currencies_Id,
37     WeightedAmount = D.WeightedAmount,
38     Countries_Id 1 = C.Countries_Id,
39     PaymentDate = S.PaymentDate,
40     CashFlow1 = S.CashFlow,
41     MaturityDate = D.MaturityDate,
42     MaturityRate = D.MaturityRate,
43     Basis = D.Basis,
44     Indexation = D.Indexation,
45     FixedRate = D.FixedRate.
```

Click on this tab

...to have access to the documentation tool and its Google like Search Engine...

Kondor+ Database Documentation - Windows Internet Explorer

W:\kia\html\documentation_INDEX.html

Kondor+ Database Documentation

Kondor+ 25U6 to 30U61

Search Tables Tables & Categories Choices

Tables Fields Choices Choice Values All

repo deal sched

10 result(s) found on repo deal sched.

- RepoSchedLn - RepoDeals_Id ScheduleLeg
Allows you to display the cash flow of a repo deal, and modify the values and dates of the payment schedule.
- RepoSchedLnVer - RepoDeals_Id ScheduleLeg
Allows you to archive the cash flow of a repo deal.
- RepoSchedLnMts - RepoDeals_Id RepoSecuSched_Line ScheduleLeg
Allows you to view Repo deal cashflow schedule movements that are stored in the database.
- RepoSchedLnTpl - RepoDeals_Id RepoSecuSched_Line ScheduleLeg
Contains a template of Repo Schedule for Compound Product
- RepoSchedLnVer - RepoDeals_Id RepoSecuSched_Line ScheduleLeg
Allows you to display the cash flow of a repo deal, and modify the values and dates of the payment schedule (versioning).
- RepoSecuSched - RepoDeals_Id
Allows you to capture a repo Deal's set of securities
- RepoSecuSchedMst - RepoDeals_Id
Allows you to archive repo (Repurchase Agreement) Securities Schedule
- RepoSecuSchedMts - RepoDeals_Id
Allows you to view RepoDeals Securities Schedule movements that are stored in the database.
- RepoSecuSchedTpl - RepoDeals_Id
Contains a template of Repo Securities Schedule for Compound Product
- RepoSecuSchedVer - RepoDeals_Id
Allows you to capture a repo Deal's set of securities (versioning).

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...then select the data model part you want to dive in

It also analyses your interface files

Example of interface file analysed

```

RepoDeals.1 - WordPad
Fichier  Edition  Affichage  Insertion  Format  ?
#####
# Import file sample : RepoDeals.1  Last
#
#####
# Insertion
#####
ACTION "INS"

TBL RepoDeals
DownloadKey "RepoKey1"
DealStatus V "Valid"
TradeDate 28/04/2000
DealType B "Buy"
PaymentType R "Rate"
RoundingType R "Round"
    
```

Interface Analysis Results - Windows Internet Explorer

DEL: Deleted field - MOV: Moved - REN: Renamed

NEW: New field - UPD: Updated datatype - UPC: Updated Choice - UPN: Updated AllowNull flag

Impact	25U6		30U61		Field comment
	Table name	Field name	Table name	Field name	
UPC	RepoDeals	Basis	RepoDeals	Basis	Specifies a basis for the calculation of interest basis is automatically displayed as defined in the the currency of the deal. This c
UPC	RepoDeals	CompoundAverageFrequency	RepoDeals	CompoundAverageFrequency	If indexation of deal is Floating rate then you calculated at Annual, Semi-Annual, Quarterly, M frequencies. However, Compound Frequency field is (added 1.7).
UPC	RepoDeals	DealType	RepoDeals	DealType	Specifies whether the deal is a bu
UPD, UPN	RepoDeals	DownloadKey	RepoDeals	DownloadKey	An alphanumeric string used to download or transfer another system.
UPC	RepoDeals	Indexation	RepoDeals	Indexation	Specifies whether the repo deal is based on a fixe is activated when rate is specified in t
MOV, UPC, UPN	RepoDeals	CapturedMarketValue	RepoSecuSched	CapturedMarketValue	Indicates whether the market value was captu
MOV	RepoDeals	ForwardPrice	RepoSecuSched	ForwardPrice	Specifies the price of the bond used in the colla date. The price is automatically calculated when a as the payment type
MOV, UPN	RepoDeals	GrossAmount	RepoSecuSched	GrossAmount	The gross amount of the deal is the market value value date. This is automatically calculated usin bond [(Price + Accrued) x Face Amount / 100] For
MOV, UPN	RepoDeals	Haircut	RepoSecuSched	Haircut	Specifies the haircut of the deal. By default, the the hedge ratio of the bond or equity has been (changed 1.7).
					Specifies whether coupon payments are used in the

...to get the result of the impact analysis