



## **IBM® Rational® DOORS® Requirements Management Framework Add-on (RMF) 6.1.0.1**

November 27<sup>th</sup>, 2012

Some previous versions of this product were delivered by Telelogic as an Asset named DOORS T-REK.

Any installed version of DOORS T-REK or previous version of IBM® Rational® DOORS® Requirements Management Framework Add-on must be uninstalled before installing IBM® Rational® DOORS® Requirements Management Framework Add-on 6.1.0.1.

Whenever RCM was used, please remove all the RCM triggers before uninstalling DOORS T-REK.

The FLEXLM feature required to execute IRDRMFAO is different from the DOORS T-REK license feature. The new feature is "IRDRMFAO" (instead of "DTREK").

### **Corrections implemented in RMF 6.1.0.1**

Component	APAR	Description
Configure Project		The Project Configuration fails if at least one of the custom attribute types "RCM Control Mode", "RCM Repair Link Modification" or "RCM Suspicion Actions" are missing in the Project Profile with the error -R-E- DXL: <addins/irdrmfao/menu calls/project/config_p.dxl:477> unassigned variable (err).
Dashboard		The metrics of type "Evolution" and "Stability" should take into account the objects created as a copy.
		The metrics of type "Count Links" and "Count Linked Objects" do not take into account the incoming links from modules that are not open.
		An error may occur when creating a view if the inserted metric has just been created.
Data model		Update the generic datamodel so that the PUID DXL column do not generate an error if the attribute IE PUID is missing.
DOC		The export of several modules to MS Word may stop with a DOORS diagnostic log.
		Reduce the time needed to start the command "RMF > Manage Documents" on big projects.
		Reduce the time needed to start the command "RMF > Manage Documents" and make updates for big document indexes by reducing the time to compute checksums. PLEASE NOTE that the existing document index modules MUST BE UPGRADED by a user with the role DOC Admin.

		To do so, please either run the command "RMF > Manage Documents" and browse all the document index modules one after another or run the script %RMFHOMEx%irdrmfao\misc\migration\migrate-doc-index.dxl
		When exporting a module from DOC, the RCM filter chosen is not taken into account if the user has selected "Load from module" then clicked the button "module parameters" and then clicked "OK".
		Record the document versions that each RCM controlled object belongs to in a new attribute "IE DOC Versions" each time a document is baselined.
		Before deleting a document, DOC should make sure that the user has the required power (manage database) to delete a baseline. If not, DOC shall warn the user and let them decide whether to delete the document without deleting the baselines or abort.
		Add two new usercallouts, one called before and the other after baselining a document. These functions are defined in the new file addins\irdrmfao\plm\includes\doc\docusercallouts.inc.
		Prevent the history of doc index modules from growing disproportionately by not recording the modifications of the attribute "DOC View Descriptions" in the history any more and by automatically baselining a doc index when it contains more than 1000 history entries.
		Make the action "Refresh References" (in the Administration window) more efficient by updating the checksum of only the objects that have been modified.
		The command "Generate History of Document" now also enables to ignore the modification whose Change Request is hidden.
Exchange		Do not "restore folders" when loading the header file but when actually importing the modules.
		When importing, the objects containing OLE should not be flagged as modified when the OLE have not changed.
		Exchange may update enumerated attribute incorrectly if the order of the labels in the enumeration is different in the module as compared to the XML.
		Exchange does not update an attribute type if its name is not the same as in the XML.
		Errors such as "ERR:attributeDefinition 'Absolute Number' error in creating attribute definition" may be reported in the log while importing. Those errors can be discarded as the import is correct anyway. They occur on system attributes whenever the locale of those attributes is different in the source database.

RCM		Display the "Manage RCM" user interface faster on big projects.
		The Project Index module is left unsaved and open in the background when setting or unsetting a module of a sub-project under RCM control.
		When changing the status of a Change Request, the following error may occur: -R-E- DXL: <addins/irdrmfao/plm/gui/crgui.inc:430> unassigned variable (RCM_ManageCR_ListDb).
		Make it possible to create a new version after a version "tagged as suppressed". This new version is created as a copy of the version just before the "suppressed" one.
		If a CR is not assigned, make sure that anyone has sufficient access rights (RMCD) to work on the CR.
		New callbacks called before and after changing the status of a Change Request (defined in addins\irdrmfao\startup\usercallout\rcmusercallouts.inc).
	PM65534	The RCM check now fully supports the modification of a composite object in reference by a RCM Administrator except the purge of a child object which is still not handled. You can add, move in, move out, reorder or, delete child objects.
RMF menu		Due to an incorrect definition of the RMF menus, some errors may occur in other user-defined menus.
WEXP		The export of an inserted view in book mode may fail on MS Word 2010.
		When exporting a big module, it is recommended to enable the option "Save Word document during generation". WEXP now also closes and reopens the exported document periodically when this option is enabled to prevent MS Word from generating errors. You can change the period (number of objects exported) by editing the file addins\irdrmfao\wexp\include\userdefs.inc.
		Small DOORS tables are sometimes not autofitted when using the [Autofit table to width of page] setting.
		The command "Extract words from OLE" leaves the temporary Word document open if the option "Process only the current object" is checked.
		WEXP may export a text with two bullets if the style applied already features a bullet.
WEXP		The traces displayed by the WEXP spooler on the server side are now recorded in the log file as well (to read the log file, please run "RMF > Manage WEXP Jobs" as a WEXP spooler admin and then click "Monitor" first and then "Log").
Word import macros		Faster conversion of tables into OLE.

## Corrections implemented in RMF 6.1

Component	APAR	Description
Dashboard		A DXL error may occur in the file dashboard/layout/statusAlarm.dxl at line 58 using RMF 6.0.0.4 when displaying a view that shows alarms. A workaround consists in running the command "Configure Dashboard" once.
		At the end of an export, Excel is sometimes not refreshed.
		The computation of a metric of type "Evolution" may be incorrect if the ending date is not specified.
		Many baselines may be opened while collecting metrics of type evolution or stability, and therefore it may take a long time if the system runs out of memory. To prevent this, only one baseline is open at a time.
DOC		The script "Generate doc history" is not restricted to master modules any more.
		An error may occur when clicking the "Module Parameters" button in the "Generate" window : -R-E- DXL: <addins/irdrmfao/plm/gui/DocWexpInit.inc:1156> null Module parameter was passed into argument position 1
Exchange		An error may occur when importing a module with readonly access rights : addins/irdrmfao/startup/exchange/xmldefs.inc:2469> An unexpected error has occurred
PFM		When a new configuration is created, the value of its parameters is empty. They should be equal to those of the previous version instead.
RCM		Changing the status of a Change Request to "Cancelled" fails if at least one impacted object is not composite (has no descendants) with the following error : "addins\irdrmfao\startup\rcm\rcmimpact.inc:977
		When changing the status of a CR to "Cancelled", RCM should check also if the descendants of the impacted object have incoming links and display an error message easier to understand if so.
		When a non-priviledge user run the command "set to be reviewed" in "manage CR" and does not confirm the action, then the CR is left open in edit mode and not visible.
		When changing the status of a CR check if the CR has been opened in exclusive edit mode successfully.
		To change the status of a CR from "to be reviewed" to "in progress", the "CR manager" role is sufficient: do not require the "RCM admin" as well.
		When changing the status of a CR from "in progress" to "to

		be reviewed", do not open the impacted modules (in exclusive edit mode) as it is useless.
		When changing the status of a CR, if an impacted modules cannot be opened in exclusive edit mode, do not display an error message for as many times as there are impacted objects, but only once.
		When changing the status of a CR, make sure first that the impacted modules and the CR are not modified so that they can be closed down to abort the transaction should an error occur. If such a module is modified, let the user decide wether saving it or aborting.
		When an error occur while changing the status of a CR, close down all the modified modules without saving in all cases.
		Whenever the status of a CR has changed in another session, RCM may not be aware of it and therefore may not prevent a user from modifying an object whose CR is now "to be reviewed" for instance.
		The RCM check may fail with a DXL error message "null LockRef".
		Let CR modules be resilient to a change in the name of the impacted modules to prevent error when displaying view "1. Delta highlights".
		The code of the RCM triggers can now be edited. It is available in the file startup/usercallout/rcmusercallouts.inc.
		If the user double-clicks a column displaying a semantic attribute (not the main column) and a new version is created, then the value of the semantic attribute is reset for the new version. The RCM triggers need to be deleted and recreated to fix this issue.
WEXP		The UI "Manage WEXP jobs" now displays detailed information about the jobs that are inconsistent and allow to delete them instead of simply displaying the error "Some errors occurs when extracting data on waiting/in progress/completed jobs".
		When the export is sent to the spooler, WEXP should close the process winword.exe spawned when starting up WEXP.

## Enhancements implemented in RMF 6.1

### 1) PFM (Product Family Management)

PFM is a solution to manage requirements in a Product Line Engineering context. PFM enables to create a generic definition of a product (or system) with optional parts, alternatives and configurable requirements, and then to derive the actual products (or systems) from it.

PFM also manages parallel developments and synchronization between the generic definition of the product and the actual products.

This version includes the following enhancements :

- Formal Change management over configurable requirements
  - Parameters can optionally be under change control
  - The modification requiring a Change Request are :
    - creation,
    - deletion,
    - modification of the name, value or unit
  - The change requests used must be accepted (or rejected) before a package version can be baselined.
- Business logic exceptions
  - Some consistency check errors can now be discarded by creating exceptions for more flexibility :

<i>Type</i>	<i>Property</i>	<i>message</i>
Criterion	Constraint	"violated constraint"
Criteria set	Mandatory ?	"at least one criterion must be selected"
	Multi-valued ?	"at most one criterion can be selected"
Parameter	Values	"<value> is not a valid value for the parameter <name> because the condition of the range <range> is not true"

- Those exceptions are duly managed:
  - the person, date, rationale, error description are recorded
  - exceptions are automatically deleted whenever the related errors disappear
- Reporting the differences between configurations
  - Creates a report showing the differences between two configurations or more
  - The result of the comparison is a MS Excel report, displaying:
    - The objects that are used in one configuration and not the other(s), and
    - a matrix showing (for all the configurations)

- the status of the criteria, and
  - the value of the parameters
- Some metrics (number of RMF objects per type in each module of each package)
- Renaming tool
  - As modules can contain references to Criteria and Parameters, PFM now offers to update those references whenever a Criterion or a Parameter is renamed
    - scans the modules that may contains references
    - displays a report listing all the references found, that can be exported to MS Excel.
    - optionally updates the references. At the end, the report displays a status for each reference, with an error message if the update failed.
- new command “Edit > Move” in the PFM Browser enabling to move items from one package version to another easily :
  - criteria
  - criteria sets (new)
  - parameters
- Performances
  - PFM browser :
    - the PFM browser starts up faster when many data are loaded
    - the window comparing two configurations is displayed faster when many data are displayed
    - for performance reason, parameters are no longer displayed in the treeview but only in the right list when selecting the node “Parameters”. The ‘Properties’ window must be opened to display all the properties of the selected parameter.
  - when modifying parameters from outside the PFM browser (using the PFM info GUI), the changes are saved faster.

## 2) RCM

- When entering in edition mode, RCM now warns that the modification of a semantic attribute will be rejected only if the user has double-clicked a column that actually displays a semantic attribute.  
NB: **You need to delete and recreate the RCM triggers to benefit from this improvement**
- In the previous versions, only semantic links could be suspect. It is now possible to define links in the Project Profile so that they are not semantic

but can be suspect though. (Please refer to the user manual §7.3.4 “Add a new relationship” for more details)

## **Known limitations**

- Explorer
  - The explorer is not able to manage a RMF project with too many items inside. The display of projects with more than 500 items will take too many time and memory resources. To cope with this limitation in the context of big projects, you should use the Scope concept to limit the size of the Explorer database, according to the part of the project you want to display.
  - The object graph view may need a large amount of memory and time resources to be processed. You should use this feature only after having filtered the visible items to limit the number of objects to process.
  - The explorer is not dynamically refreshed when database modifications (item creation, deletion, renaming, moving) are done outside of the tool.
- Exchange
  - The XML format processing used by Exchange is not very efficient because of the use of DXL script programming and not compiled code. The import operation may take a lot of time and memory resources to process the dataset. For example, the processing of 5000 objects to import will take several hours.
- Word generation
  - Because of the architecture of the DOORS to Word generation operation, that needs an instance of Word to process the data, the export of large amount of data may take a lot of time and resources. The amount of resources used is also dependent of the used formats. In case of memory or time limit, you should process incrementally by exporting several smaller dataset.
- RCM
  - You should avoid putting under RCM control too many modules within the same operation, because this operation may use a lot of memory. 10 modules should be a maximum, except if you can test before that you may supersede this limit without any trouble.
  - RCM is not able to control table elements (tables, rows, columns or cells), even in “All objects” mode. The only supported case is when a table is a part of a composite RMF object.
  - RCM is not able to control heading objects, even in “All objects” mode or if embedding of RMF objects is allowed.
- PFM
  - When creating an insulated package version, the inner traceability links (as opposed to the links with other packages) may be recorded in the same link modules (instead of a copy located in the new workspace) if those link modules are not located in the hierarchy of the package version

- Merge
  - Contextual attributes are not handled
  - Child objects (of composite objects) are not handled