IBM Rational DOORS Requirements Management Framework Add-On

IRDRMFAO INSTALL GUIDE

IBM Rational DOORS Requirements

Management Framework Add-on

IRDRMFAO Install Guide

Release 6.1.0.3

Before using this information, be sure to read the general information under the "Notices" chapter
on page 36.
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1 Introduction

This document describes the procedure to install **IBM® Rational® DOORS® Requirements Management Framework Add-on**. This software is also referred to as IRDRMFAO or just RMF.

This software has been previously delivered by Telelogic as a Professional Service Asset named **DOORS T-REK.**

IRDRMFAO supports two installation modes:

- **Full installation**: meaning that all the files will be installed on the computer, either:
 - In the directory where the DOORS client was installed (default mode)
 - In another directory (mode called "out of place" installation)
- ➤ Workstation installation: meaning that your installation of IRDRMFAO will depend on a full installation done on a file server. The main advantage of this installation mode is the ease of maintenance. Indeed when upgrading to a newer version of IRDRMFAO, you only have to perform one single installation, on the file server, except in the case below:

BEWARE!

To upgrade a workstation installation of DOORS T-REK 5.3p2 (or earlier) to IRDRMFAO 6.1.0.3 you have to (re)install IRDRMFAO on all the client computers because the client installation is not backward compatible with a client installation for T-REK

The Installation Wizard is available in three languages: English, French and German.

IRDRMFAO also supports **Silent installation**. In this mode the interactions with the user are replaced by a parameter file. See § 4 "Silent Installation" to learn how to setup and run a silent installation.

IRDRMFAO includes a binary component (GraphvizContainer.exe) providing some services from Graphviz. Graphviz is an open source graph visualization software. This component is used in the **Explorer** to generate the layout of graphs.

2 Check that you meet the prerequisite

Before installing any version of IRDRMFAO, it is required to uninstall any previous version of IRDRMFAO or DOORS T-REK.

- To install IRDRMFAO, you must have Administrator rights.
- Your computer must have at least 43 MB of free disk space for a full installation, or only 1 MB for an installation in workstation mode.
- IRDRMFAO 6.1.0.3 is restricted to Windows platforms and compatible with DOORS versions:
 - DOORS 9.1
 - DOORS 9.2
 - DOORS 9.3
 - DOORS 9.4
 - DOORS 9.5
- The WEXP and the irdrmfao.dot modules of IRDRMFAO are compliant only with all versions of Word starting from Word 2000 up to Word 2010.
- Check that you have rights to create files into the DOORS Home directory (directory where DOORS has been installed) and to modify the Windows Registry.
- Only one version of IRDRMFAO may be installed with the Wizard. This install is not
 compatible with the existence of a previous version of IRDRMFAO or of DOORSTREK, whatever the version, except in the case where the two installations are for two
 different versions of DOORS.

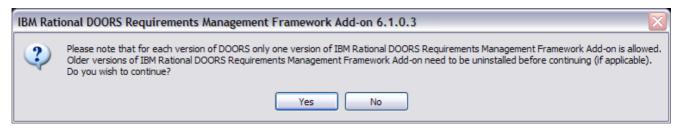
3 Install IRDRMFAO

Installing IRDRMFAO with its Installation Wizard is an easy action. Just follow the screenshots, don't forget the prerequisite and everything will be fine.

3.1 Select the language to be used by the installer



This choice only define the language used by the installer. This has no effect on the language for IRDRMFAO (always in English).



3.2 Warning

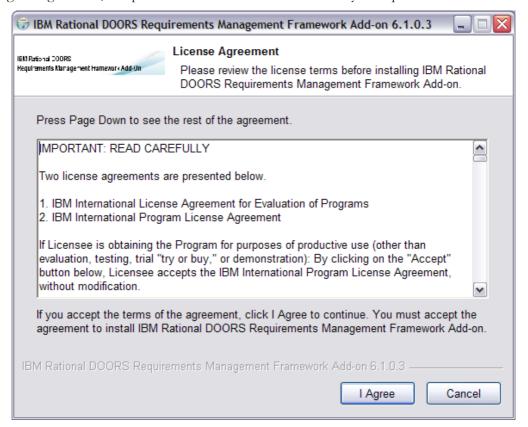
The installation wizard can successfully install IRDRMFAO 6.1.0.3 only if no previous version of IRDRMFAO (whatever the version) was installed for the same version of DOORS.

Whenever another version of IRDRMFAO has been installed for another version of DOORS, the installation will be successfully performed.

Click "Yes" after checking that IRDRMFAO is not already installed for the version of DOORS that you plan to install IRDRMFAO 6.1.0.3 against. Otherwise, click « No » and then unistall IRDRMFAO before running the installed again.

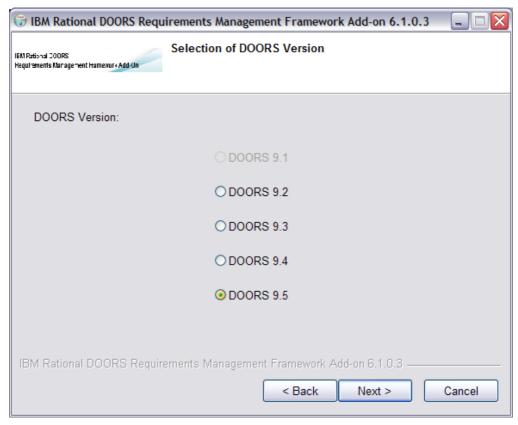
3.3 Accept Licence

After reading this agreement, accept it to continue the installation or deny it to quit the installation.



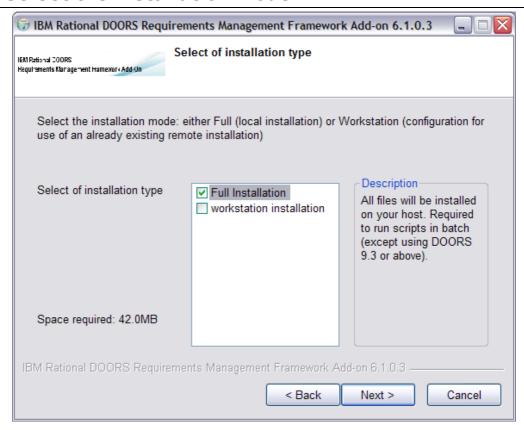
3.4 Choose DOORS version

In this page, simply choose for which version of DOORS, IRDRMFAO will be installed. To install IRDRMFAO on several DOORS versions, you have to execute the Installation Wizard several times.



The installer automatically detects which version of DOORS is installed so that the choice of a version that is not installed, is disabled (greyed out).

3.5 Select the installation Mode



In this page, you are asked to choose either to fully install IRDRMFAO on your computer, or rely on a remote installation of IRDRMFAO.

This second possibility called "workstation installation" consists in configuring the selected version of DOORS to use a remote installation. The advantage of this workstation installation is the simplicity to upgrade to a newer version of IRDRMFAO later on. There is no need to upgrade IRDRMFAO on each DOORS client computer: only the shared installation of IRDRMFAO shall be changed.

BEWARE!

To run scripts in batch mode, RMF must be installed in "full installation" mode <u>and</u> in the default directory (the HOME of DOORS)

This limitation does not apply if you are using DOORS 9.3 or higher.

3.6 Select the installation Directory



Depending on the installation mode that has been chosen, you are asked to enter in this page:

- in the "full installation" mode: the directory where IRDRMFAO should be installed
- in the "workstation installation" mode : the path to a remote installation of IRDRMFAO.

This path to be entered is the directory where IRDRMFAO has been installed (in the "full installation" mode), i.e the following sub-directories should exist in that directory: "lib" and "IRDRMFAO".

Important: To make it easier to install IRDRMFAO in workstation mode, the right path can be automatically provided to the user.

To achieve that, you have to create a file called "IRDRMFAO.INI" containing this path, and run the installer in a directory containing this "IRDRMFAO.INI" file.

The "IRDRMFAO.INI" file shall have the following content:

[Server]

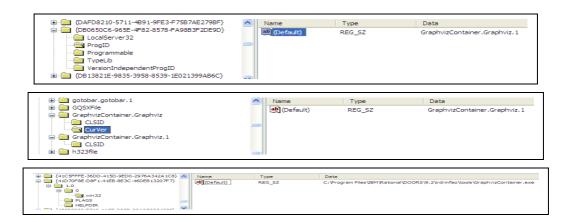
IrdrmfaoDir=<directory of the remote installation of IRDRMFAO>

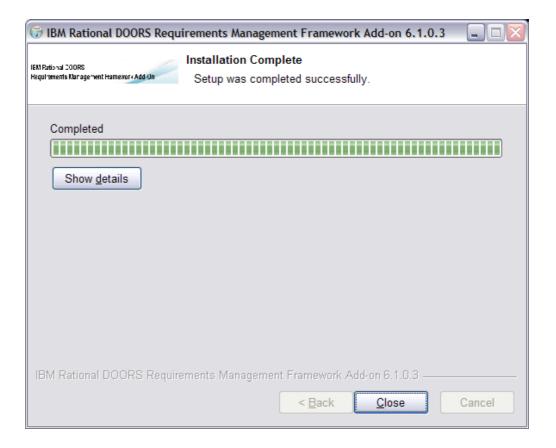
[Server]

IrdrmfaoDir=\\UKSERV1\DOORS\irdrmfao

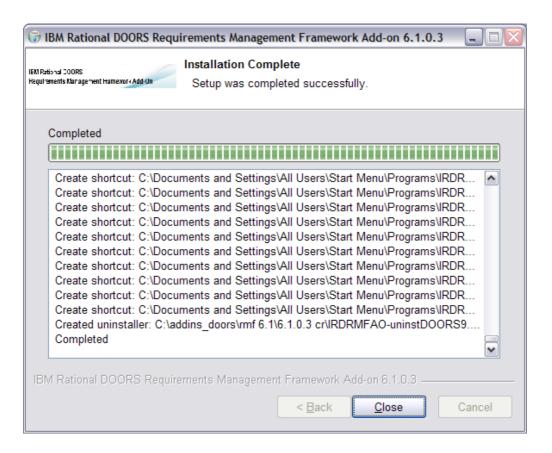
3.7 End of installation

During installation phase, the GraphvizContainer executable is registered as an OLE server:



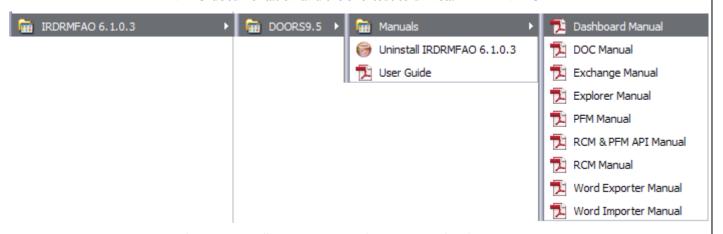


Click on the button "Show details" to obtain precisely what was done.



After the installation of IRDRMFAO, you may check the correct execution of the setup program:

1. A new menu will appear in the Windows start menu and you will have some shortcuts to the IRDRMFAO documentation and the shortcut to uninstall IRDRMFAO.



2. Execute the DOORS client to access to the DOORS data base.

You should have a RMF menu in the DOORS explorer tool, and also in the module windows.

Run the About operation in the RMF menu (for project and for module), a dialog box should be displayed as :



3. Open a Word document.. You should be able to see the IRDRMFAO menu bar, as in:



If the menu bar is not visible, the **irdrmfao.dot** file has not been copied into the Office startup directory and is not visible as a Word complement.

Current version is 1.14. The macros are digitally signed and therefore no longer require your MS Word security options to be lowered to the level "Medium".

4 Silent Installation

IRDRMFAO supports Silent Installation mode.

The installer runs with interaction, and read some parameters into a response file instead.

4.1 Create the response file

The response file shall be called "IRDRMFAO.INI" and be located in the same directory as the installer.

This "IRDRMFAO.INI" file shall have the following content:

```
[SilentInstall]
InstallMode=full OR workstation
DoorsVersion=<version number (see examples below)>
InstallDir=<directory in which IRDRMFAO will be installed - useful ONLY in full mode>
IrdrmfaoDir=<directory of the remote installation of IRDRMFAO - required ONLY in workstation mode>
```

2. DOORS version number format: <major>.<minor>

Example: 9.5

3. If the DOORS version provided is not one of the available DOORS versions, then IRDRMFAO is by default installed for the most recent version of DOORS.

Some examples below:

```
[SilentInstall]
InstallMode=full
DoorsVersion=9.5
```

```
[SilentInstall]
InstallMode=full
DoorsVersion=9.5
InstallDir=D:\Software\RMF\v6.1
```

4.2 How to run the installer in silent mode

The response file shall be located in the same directory as the installer.

Then simply run the installer passing /S on the command line (case sensitive) :

```
ratlDOORS RequirementsFrmwork 6-1-0-3.exe /S
```

You can aslo request the creation of a log file that will contain an error message whenever the installation fails.

```
ratlDOORS_RequirementsFrmwork_6-1-0-3.exe /S /LOG=<file path>
```

Exemples:

```
ratlDOORS_RequirementsFrmwork_6-1-0-3.exe /S
/LOG=C:\temp\IRDRMFAO.log
ratlDOORS_RequirementsFrmwork_6-1-0-3.exe /S
/LOG="C:\IRDRMFAO\IRDRMFAO.log"
```

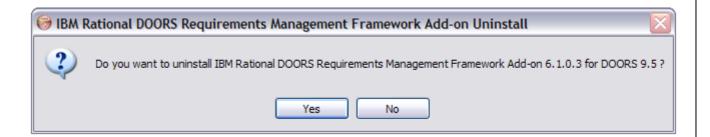
The IRDRMFAO installer returns an error level as a result of its execution, and write the following error messages into the log file:

Error level	Comment	Content of the log file
0	Normal execution (no error)	
2		IRDRMFAO installation aborted : the response file IRDRMFAO .ini is missing
3	Installation	IRDRMFAO installation aborted : invalid parameter 'InstallMode' in the file : IRDRMFAO.ini
4	aborted by script	IRDRMFAO installation aborted : none of the supported DOORS versions is installed
5		IRDRMFAO installation aborted : bad or missing parameter 'IrdrmfaoDir' in the file : IRDRMFAO.ini

5 Uninstall IRDRMFAO

To uninstall IRDRMFAO, use the shorcut directly present in the start menu or go directly to "Add/remove Programs" in the Control Panel.

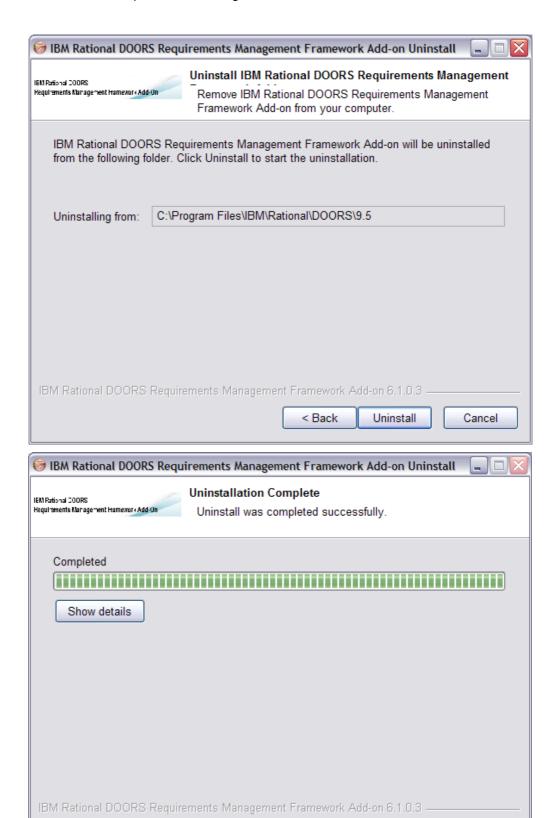
5.1 Confirm uninstallation



Before beginning the uninstallation, the Wizard will ask you if you want to remove IRDRMFAO.

5.2 Do uninstall

After this window, there is no way to return if you decide to uninstall IRDRMFAO. If yes, you will have the next window as follows:

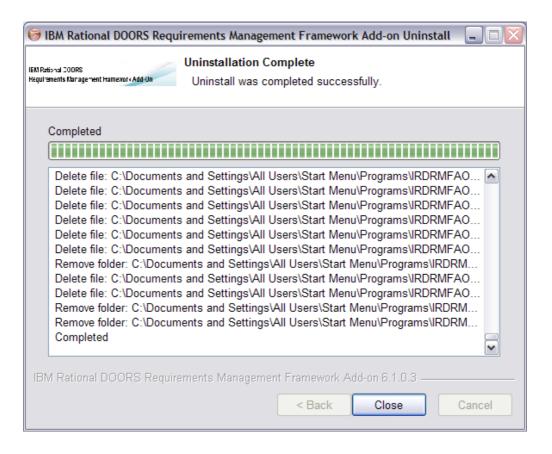


< Back

Close

Cancel

Click the button "Show details" to see the details of the uninstallation process.



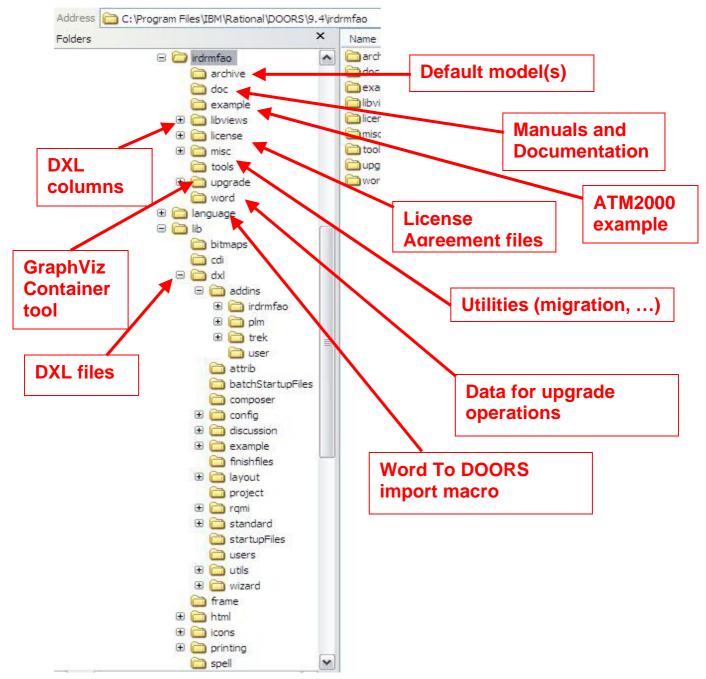
6 Modifications in the environment

When installing IRDRMFAO, some modifications of your standard DOORS environment occur. Several files are added into the IRDRMFAO standard directories.

Example for DOORS 9.4:

These files are added in case of default installation or out of place installation. In case of an out of place installation, the IRDRMFAO install may be anywhere in the file system. These file are source DXL files, but they do not contain DXL definition, but only includes to DXL source files that are located always in the IRDRMFAO install directory.

The structure of the IRDRMFAO files is displayed in the next figure:

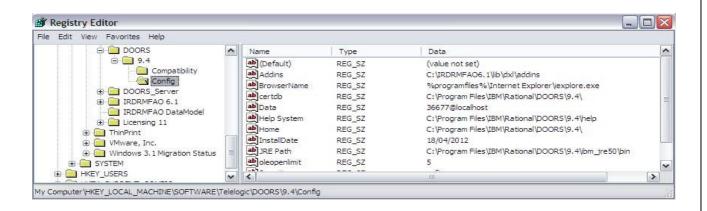


In case of default installation, the "IRDRMFAO" directory is replaced by the DOORS install directory, for example: "C:\Program Files\IBM\Rational\DOORS\9.4".

The **irdrmfao.dot** Word complement file should be automatically installed into the standard Office startup directory, if not; it is required to copy by hand this file into the right place.

In case of out of place install, the setup program modifies the registry key **Addins**, allowing defining the list of complementary directories:

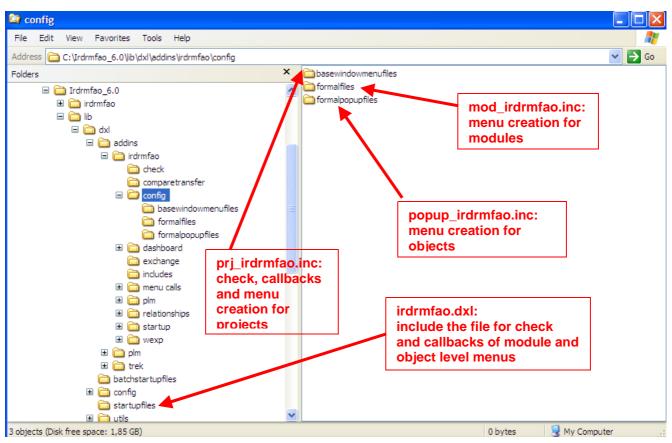
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7 Menus configuration

All the IRDRMFAO menus are dynamically created and checked. The corresponding code is not uncrypted, and it is possible to change these menus. Only people with a good knowledge of DOORS and IRDRMFAO should modify these files that are coded into DXL.

The different files that are involved into the IRDRMFAO menu creation are:



Example: RMF menu for projects

```
void RMF declareItem (string sName, int checkFunction(), void executeFunction())
    createItem (checkFunction, executeFunction, sName, null, null, modKeyCtrl, null, null,
           sName, sName)
const string RMF_MENU_RMF = "RMF"
int RMF MENU RMF check()
   return menuAvailable
}
const string RMF_ITEM_CREATE_PROJECT = "Create/Tag a RMF Project"
void RMF ITEM_CREATE_PROJECT_exec() {eval_ "#include <addins/irdrmfao/menu</pre>
           calls/project/CREATE P.DXL>"}
int RMF ITEM CREATE PROJECT check()
{
   User u = find()
   if (null u)
          return menuUnavailable
   UserClass c = u.class
   if (c != databaseManager)
           return menuUnavailable
   Folder f = current
   if (null f || !canControl(f))
           return menuUnavailable
   return menuAvailable
}
// RMF menu
RMF declareMenu (RMF MENU RMF, RMF MENU RMF check)
RMF declareItem (RMF ITEM CREATE PROJECT, RMF ITEM CREATE PROJECT check,
           RMF ITEM CREATE PROJECT exec)
RMF_declareItem (RMF_ITEM_CONFIGURE_PROJECT, RMF_ITEM_CONFIGURE_PROJECT_check,
           RMF ITEM CONFIGURE PROJECT exec)
RMF declareItem (RMF ITEM CREATE MODULE, RMF ITEM CREATE MODULE check,
           RMF ITEM CREATE MODULE exec)
separator
RMF declareMenu (RMF MENU EXPLORE, RMF MENU EXPLORE check)
   RMF_declareItem (RMF_ITEM_INDEX, RMF_ITEM_INDEX_check, RMF_ITEM_INDEX_exec)
   RMF_declareItem (RMF_ITEM_SCOPE, RMF_ITEM_SCOPE_check, RMF_ITEM_SCOPE_exec)
   separator
   RMF declareItem (RMF ITEM EXPLORE MODEL, RMF ITEM EXPLORE MODEL check,
           RMF ITEM EXPLORE MODEL exec)
   RMF declareItem (RMF ITEM EXPLORE PROJECT, RMF ITEM EXPLORE PROJECT check,
           RMF_ITEM_EXPLORE_PROJECT_exec)
   RMF_declareItem (RMF_ITEM_EXPLORE MODULE,RMF_ITEM_EXPLORE MODULE_check,
           RMF ITEM EXPLORE MODULE exec)
end menu
```

8 Troubleshooting

If DOORS reports some errors after the installation of IRDRMFAO, check:

- o That the file named irdrmfao.dxl exists in the config and startupfiles directories of DOORS.
- Checks the content of the other files in the same directories, to detect any conflict between the IRDRMFAO files and the other files.
- O Checks the content of the file "...Migration.dxl", in the startupfiles directory. Suppress any IRDRMFAO file inclusion found in this file.
- Check the content of the predefined **startup.dxl** file.

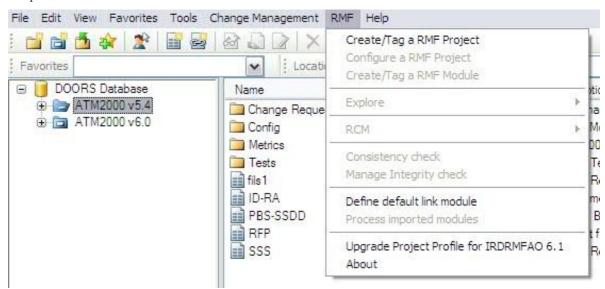
Always remove the previous version of IRDRMFAO (or any installed T-REK version) before reinstalling IRDRMFAO.

9 Upgrade of IRDRMFAO projects

IRDRMFAO 6.1.0.3 operations are available only for project updated or created for IRDRMFAO 6.1.0.3. An "upgrade" operation is provided with IRDRMFAO 6.1.0.3. This upgrade operation makes the project configuration compatible with IRDRMFAO 6.1.0.3, for any previous IRDRMFAO or DOORS T-REK version.

The project data are not modified by the upgrade, nor the existing module types in project configuration, except in case of migration of a previous DOORS T-REK version, with the RCM component deployed on the project. In this last case, because of the modification of the RCM trigger management, the old RCM triggers at **project level** are deleted and created again, but at **module level**.

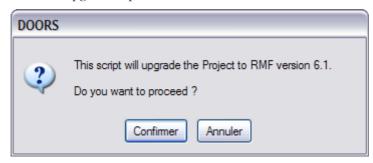
Example:



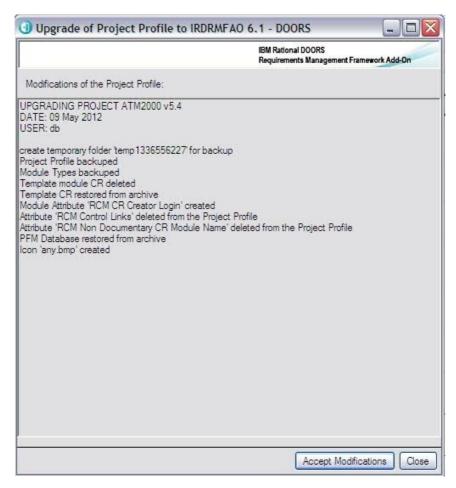
The "Upgrade Project Profile for IRDRMFAO 6.1" operation is visible only for the RMF projects not yet compatible with IRDRMFAO 6.1.

The execution of this operation will extend the "Project Profile" of your project, and with add some new module types in the "Module Types" folder.

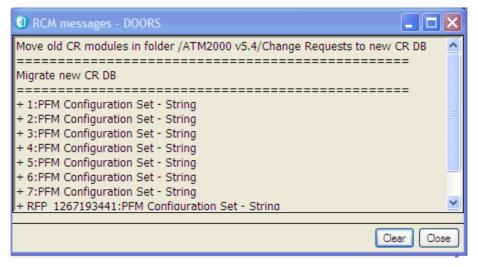
• Execute the "Upgrade" operation



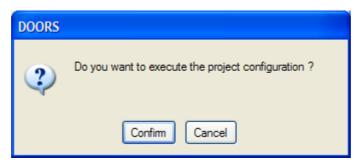
• Accept the modifications



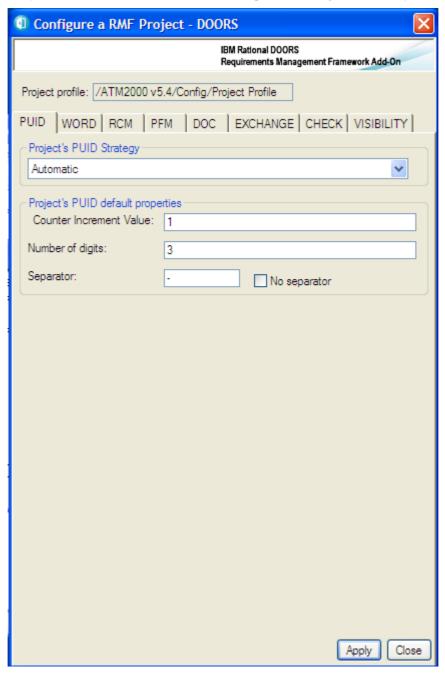
 If RCM has been previously deployed on the project, the CR project database structure is checked to be modified if required (for old T-REK versions) and the CR modules are upgraded according to the current CR template



• If you want to use RCM, DOC or EXCHANGE functionalities, you may execute the default project configuration (if these functionalities have not been configured yet)



• If you have answered 'Confirm', then the project configuration utility is automatically executed:



The modifications done inside the Project Profile depend on the previous version of IRDRMFAO (or TREK) used on the project.

The upgrade adds all the required definitions required by the nw version of IRDRMFAO.

For example, an upgrade from TREK 5.2 to IRDRMFAO 6.1 brings the following modifications:

```
Template module NON DOC CR LIST deleted
Template module CR deleted
Template CR restored from archive
Object Attribute 'IE Priority' created in the Project Profile
Object Attribute 'IE Model View deleted in the Project Profile
Object Attribute 'IE View Name created in the Project Profile
Object Attribute 'IE View' created in the Project Profile
Module Attribute 'RCM CR Impact Mandatory' created in the Project Profile
Module Attribute 'RCM CR Creator Login' created
Object Attribute 'IE Is Contextual Attribute' created in the Project Profile
Object Attribute 'IE Link is semantic' created in the Project Profile
Object Attribute 'IE Link can be suspect' created in the Project Profile
Module Attribute 'IE Spooler Administrator' created in the Project Profile
Module Attribute 'IE Spooler Name' created in the Project Profile
Module Attribute 'IE PFM Configuration Index' created in the Project Profile
Module Attribute 'RCM Is Specific Version Code' created in the Project Profile
Module Attribute 'RCM Detect links to working obj with different CR' created in
the Project Profile
Module Attribute 'RCM Repair Link Modification' created in the Project Profile
Attribute 'RCM Control Links' deleted from the Project Profile
Attribute 'RCM Non Documentary CR Module Name' deleted from the Project Profile
Section 'Definition of the Views' created in the Project Profile
Section 'Definition of the icons' created in the Project Profile
Module Type 'Non Documentary CR List' deleted
Template 'NON DOC CR LIST' deleted
PFM Database restored from archive
Icon 'any.bmp' created
Icon 'cr.bmp' created
Icon 'db.bmp' created
Icon 'di.bmp' created
Icon 'id.bmp' created
Icon 'ivv.bmp' created
Icon 'pbs.bmp' created
Icon 'sr.bmp' created
Icon 'ur.bmp' created
View 'Definition of the Templates' created
View 'Definition of the Relationships' updated
View 'Definitions of the Model Views' deleted
View 'Definition of the Views' created
View 'Definition of the Icons' created
```

The "technical" templates in the **Module Types** folder may be replaced. Those templates used by tools are:

- CR: Change Request template. Used by RCM.
- DASHBOARD: Dashboard template, used by Dashboard.
- DI: Document Index, used by DOC.

The upgrade does not modify any actual data of your project.

To complete the upgrade of your project, you will probably have to upgrade your already existing templates and your project modules as well.

10 Client configuration

DOORS allow you to give parameters on the command line of the shortcut used to execute the DOORS client. The list of parameters may be found in the DOORS standard documentation.

Here you can find some useful examples.

Connexion to a database server different from the standard one

-data 36677 @ my_server

may be used to define the DOORS server from which the data should be downloaded (in the example on the port 36677 of the my_server computer)

Connexion with a user name already defined

-user my_name

may be used to define the DOORS login name.

Installation of IRDRMFAO on an application server (or file server)

-addins or -a " $\$ app_server $\$ IRDRMFAO $\$ lib $\$ dxl"

to define a directory to find the IRDRMFAO addins. This information may be also entered in the registry configuration of the DOORS client, or in the "ADDINS" environment variable. In the example *app_server* is the name of the computer used as application server.

-dx1 "#include <\\\\app_server\\IRDRMFAO\\lib\\dxl\\startupfiles\\irdrmfao.dxl>"

to specify a startup file. This parameter cannot be defined in the registry.

These parameters allow you to have different IRDRMFAO contexts. You should notice that the command line has a limited size, in case of overflow you may define these three values as a combination of registry/environment variables values and command line.

Also, it is required to add the **irdrmfao.dxl** files in the standard DOORS **config** directory.

11 Complements

IRDRMFAO is delivered with some sample or utility DXL script files.

Content of the directory irdrmfao\misc\addins	
History.zip	DOC complement useful to generate a revision table based on the changes between the versions of a document.
lib_no_irdrmfao.zip	Files needed on a DOORS client installation to edit a module created with RMF.
RMF_kitchen.zip	RMF kitchen scripts. To install it, unzip it in the directory DOORSHOME\lib\dxl\addins

Content of the directory irdrmfao\misc\api	
(Example of the use of the RCM & PFM API)	
check_module_rcm.dxl	This example script demonstrates how to look into a module under RCM control, to get the list if requirements, the list of versions and the CR associated with each new version.
modify_module_rcm.dxl	Example of the modification of a RCM controlled module:
	-create a CR
	-create a new object
	-create a new version (modification)
	-accept the CR
set_module_rcm.dxl	Sets a module under RCM control.

Content of the directory irdrmfao\misc\attributes	
(DXL attributes)	
ie_puid.dxl	code to create "IE PUID" as a DXL attribute whose value is based on "absolute number"
rcm_last_in_ref.dxl	code to create a DXL attribute indicating whether a controlled object version is the last version in reference

Content of the directory irdrmfao\misc\migration	
migrate-doc- index.dxl	This script has been added in RMF 6.1.0.1. It is useful to migrate the document index modules of all the RMF 6.1 projects of the database so that they are compatible with RMF

	6101 (or higher)
	6.1.0.1 (or higher).
	Indeed, starting from this version, the checksum algorithm has changed and the checksums of the document index modules created before must be computed again.
	Alternatively, you can simply run "RMF > Manage documents" and open all the document index modules one after another to migrate them.
	The script relies on the project index modules to find the document index modules.
	Please run this script with either the "Administrator" user account or with a user account with the "DOC Administrator" role
	(if not the document index that the user has not access to will be ignored)
migrate-rcm.dxl	This script migrates the modules under RCM control created with TREK 5.2 (or a previous version). It either migrate all the modules of the project of only those located in the current folder (and subfolders).
	This script:
	- creates new RCM attributes and sets their values
	- makes sure that all the controlled object versions have an impact object (this was not the case for the first version previously)
	- updates the impact objects
migrate-rcm- batch.dxl	Same as previous. Meant to be run in batch mode.
patch- dashboard.dxl	This script is useful to update the dashboard modules that have been created before IRDRMFAO v5.4
	It recusively scans the database (reading modules) from the current folder to find and upgrades all the dashboards
	You need write access to the installation directory of IRDRMFAO to perform this upgrade.
patch-puid.dxl	This script is useful to fix the DXL columns and DXL attributes of modules created with TREK.
	The script fixes the regular expression "[\\]" that is no longer supported and also performs some other modification for compatibility with DOORS Web Access.
	It can be used on a module or recusively on a folder or a project.
	It can be used in batch mode, in which case a log file will be created (the environment variable LOG_FILE can be used to define the location of the log file)
upgrade-all- projects.dxl	This script upgrades all the RMF projects of the database to the current version of RMF.

Content of the directory irdrmfao\misc\model	
define_description.dxl	set the descriptions of views and attributes

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	according the configuration file model.txt
synchronize_definitions.dxl	This script synchronizes all the modules of the project with the definitions of their templates.

Content of the directory irdrmfao\misc\other	
restore_cancelled.dxl	example of restoration of a requirement from the information saved into a cancel CR
restore_links.dxl	use of the history to restore links
unlockbsd.dxl	unlock a baseline set definition

Content of the directory	irdrmfao\misc\pfm_browser
pfmuserdefs.inc	Implementation of the user-defined commands of the PFM browser

Content of the directory irdrmfao\misc\project_index			
create_index.bat	Create the Project Index of a project in batch		
create_index.dxl			
update_index.bat	Update the Project Index of a project in batch		
update_index.dxl			

Content of the directory irdrmfao\misc\wexp		
batchwexp.dxl	execution of WEXP without interaction and possibly in batch mode	
docwexp.dxl	execution of WEXP without interaction to export all the master modules of a document	

Content of the directory irdrmfao\misc\wexp_spoole		
batch management of the WEXP spooler		
spooler_getlog.bat		
spooler_pause.bat		
spooler_remall.bat		
spooler_remlocks.bat		
spooler_restart.bat		
spooler_stop.bat		
startspooler.bat		

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