

Overview of Migration from DOORS® 9.6x to DOORS® Next Generation

Introduction

As IBM®'s DOORS® Next Generation increasingly gains maturity above the capabilities of its predecessor, DOORS® (currently at version 9.6x), many current DOORS® users are looking at how they can most easily migrate their data from the old system to the new. Recent additions in functionality to both tools create an even more powerful and simple method for handling this transfer. This article describes some of the issues to be considered when undertaking this activity, and the recommended strategy to be employed.

The Definition of 'Migration'

No two migrations will be exactly the same, but it is important to make a distinction between a 'migration' and other forms of data transfer, such as with an interchange.

Migration is:

- One-way
- Non-destructive
- A selection of data, with the original locked down and never coming back
- A move from one tool to the other
- Where the users move too

Migration is not:

- Two-way
- All data
- A repeated interchange between tools, where data moves for review and potentially for update
- Where users continue to exist in both tools

Essentially, the migration discussed here refers to when an organisation principally wishes to stop using DOORS® 9.x, and start using DOORS® Next Generation. The big reasons behind such a switch would be in order to move to the web-based approach to requirements management, or to take advantage of the advanced configuration management capabilities of DOORS® Next Generation.

Not everything will be migrated. DOORS® Next Generation was never designed to be DOORS® version 10 and, as such, some DOORS® 9.x aspects have no functional equivalent in DOORS® Next Generation, or implementations differ to such an extent that they can be regarded that way. These are not considered gaps. In some cases, there is no business value for including them, in others there are work arounds. Integration meta-data can be migrated if chosen, but this is of limited use in DOORS® Next Generation and it is recommended that this is identified and removed. If there are custom integrations in DOORS® 9.x, these may also need considering.

DOORS® 9.x concepts are:

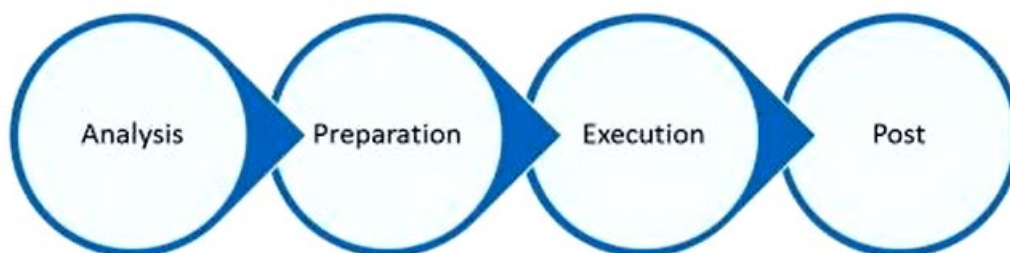
- Access Controls (will be handled by Jazz™)
- Attribute DXL (although the displayed results are migrated)
- Baselines (including Baseline Sets Definitions and Baseline Sets)
- Descriptive modules
- Dictionaries
- Discussions (although these can be converted to Attribute DXL)
- Display Schemes

- DOORS® partitions
- DOORS® project and module archives (i.e. DPA or DMA)
- DXL
- Favourites
- Filters (although the migrated collection will show the expected result set)
- Groups
- History
- Layout DXL columns (although these can be converted to Attribute DXL)
- Link attributes
- Link modules
- Linkset pairings
- Page Setups
- Predicate Mappings
- ReqIF packages
- Shareable sections
- Soft-deleted data (i.e. deleted but not purged)
- Sorts
- Suspicion
- Template files for Rational® Publishing Engine
- Triggers
- Users and user options
- Working Sets

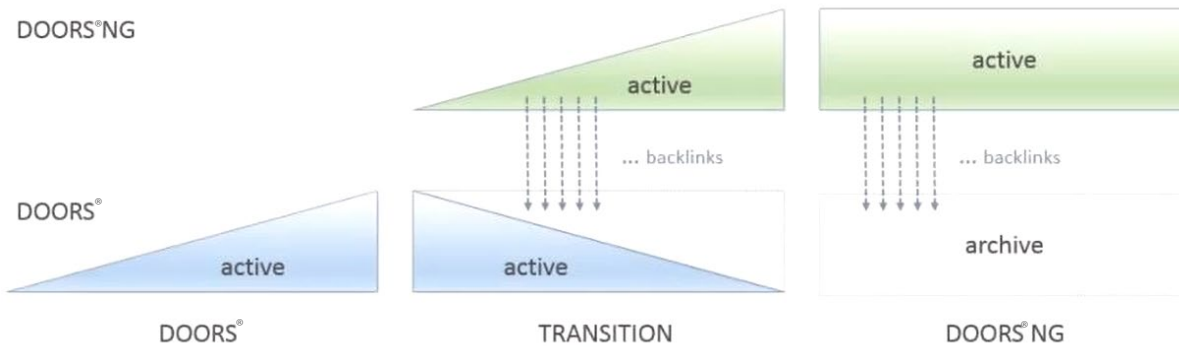
The Recommended Approach

Exactly how a migration is completed will depend on the needs and priorities of the organisation in question. Broadly though, the process for completing a migration will break down into 4 distinct stages.

First though, it needs to be decided exactly which parts of the current DOORS® 9.x database will be migrated. In order to reduce effort and minimise cost and risk, only a relevant subset of data in the context of the business need will be migrated. This subset should focus on current and future work that will benefit from the capabilities offered by DOORS® Next Generation, and should not include historical or completed projects. DOORS® is never going to reach version 10, but still has a long life ahead of it and is not going anywhere for the foreseeable future. For that reason, it is strongly recommended that historical data and project audit trails up to the point of migration are kept in DOORS® 9.x.



In all cases, it is recommended that this process is done incrementally rather than in a 'big bang' event. The move to DOORS® Next Generation will require users to be retrained, and a ramp-up of the new system and a ramp-down of the old will ensure a smooth transition from one to the other.



1. Analysis

The subset of data needs to be analysed to understand the shape and size of the source data, and then to identify potential risk areas and possible process improvements. Using the new 'Migration' menu, metrics for the selected data set can be produced in CSV and XML files. When loaded into Excel, the former shows which modules each attribute is used in, and the types of attributes, allowing us to see the diversity across the data set. The latter allows us to put the data into a tabulated format. This is the only phase which should be done all in one go; the later phases can be done incrementally.



2. Preparation

In the same way that product development can benefit from the 'left shift' approach, time invested in preparation improves the quality of migrated data. This is going to be invested in several activities:

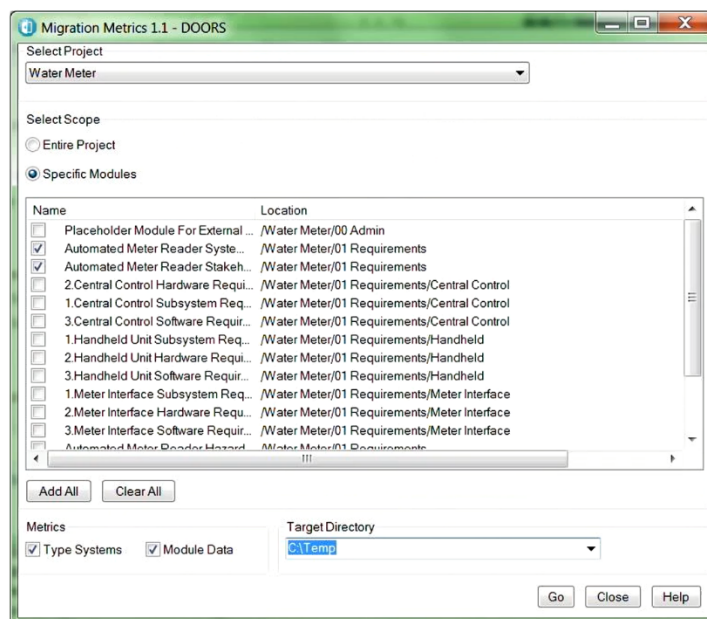
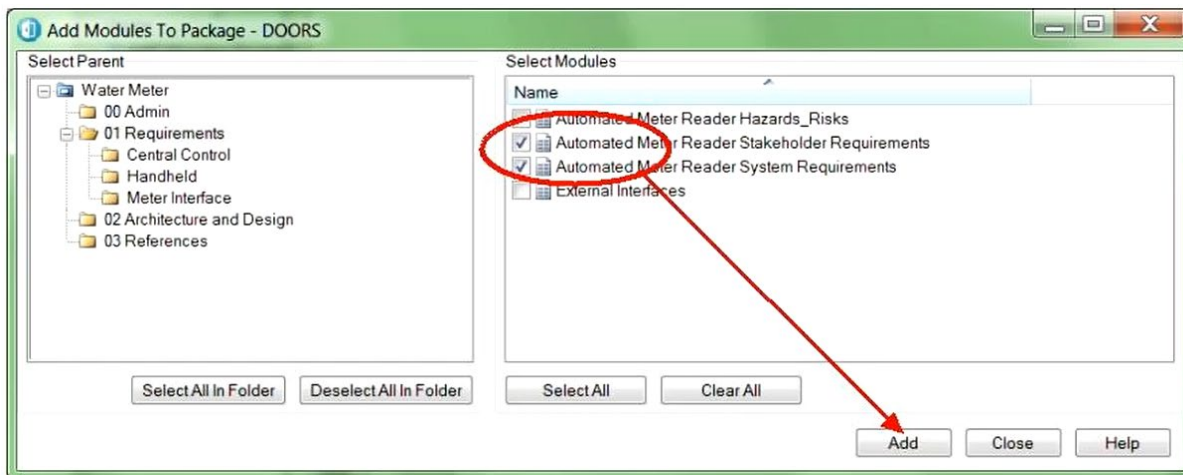
- Remove soft deleted artefacts
- Consolidate attributes
- Consolidate attribute types
- Consider adding an 'artefact type' attribute if it does not exist and organising objects accordingly

3. Execution

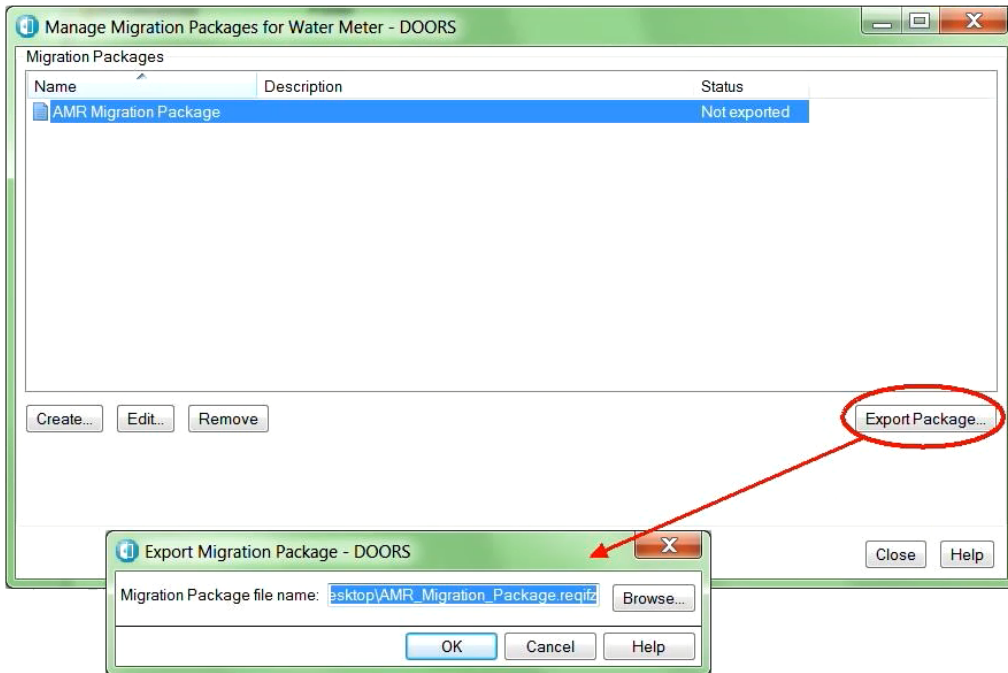
At this point, having a consolidated, tidy subset of data means that the actual transfer should be relatively painless. The steps for the process break down like this:

In DOORS® 9.x:

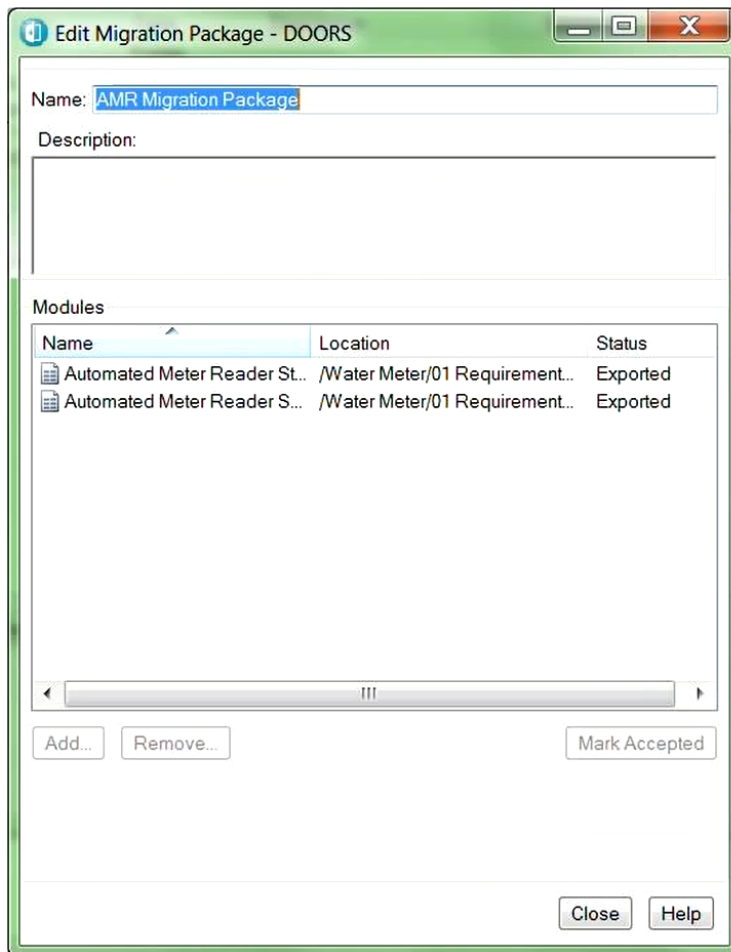
- Create a new migration package
- Choose the (formal) modules to be transferred, and add them to the package. (Links are automatically selected as required, so link modules do not need to be added.)



- The wizard will show that the package has not been exported. At this point we select 'Export Package'. What is exported is technically a ReqIF package, but has been optimised to contain extra information relating to things such as DOORS® tables, OSLC links, and some specific migration attributes

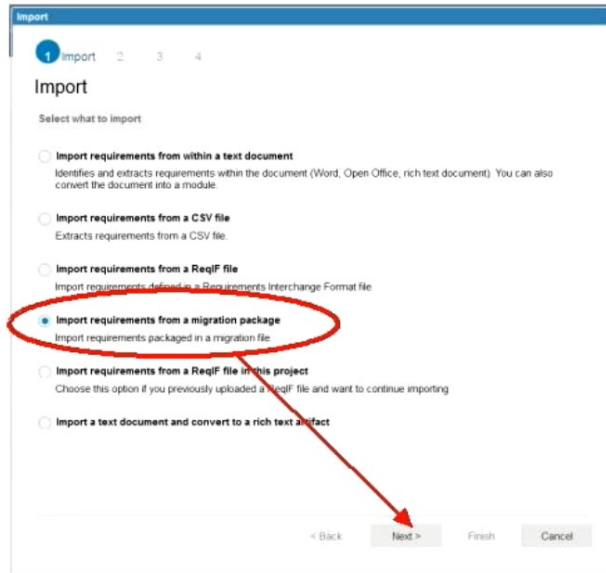


- The package (and modules within it) will show as 'Exported' – data is there in a read-only state. Now we need to physically move the package to the destination



In DOORS® Next Generation:

- Create a new, blank project. As we will be harvesting many of the project properties from the package, there is no need to establish artefact types
- Choose the option to 'Import requirements from a migration package'



- Once the package is uploaded for processing and the steps in the wizard have been completed, a report is produced confirming the results






Report for import of ReqIF Package: AMR_Migration_Package

Generated on 23 September 2015 16:02:54 BST (https://morgan.demo.com:9443/rm/reqif_cr3gAWH7EeWy02AMZ_Extg)

Summary

- ✔ Successfully imported 17 of 17 Data Types.
- ✔ Successfully imported 118 of 118 Attribute Definitions
- ✔ Successfully imported 5 of 5 Attribute Definitions from Link Types
- ✔ Successfully imported 3 of 3 Artifact Types
- ✔ Successfully imported 1 of 1 Link Types.
- ✔ Successfully imported 4 of 4 folders
- ✔ Successfully imported 221 of 221 Artifacts
- ✔ Successfully imported 2 of 2 Modules
- ✔ Successfully imported 8 of 8 standalone Artifacts
- ✔ Successfully imported 20 of 20 Links
- ✔ Successfully imported 24 of 24 Views.

Data Types

| | |
|---|---|
| <p> ReqIF ID URI sameAs</p> | <p>Data Type matches existing system type _00000000-1111-2222-4444-Pseudo-ForeignDOORSURLDatatype https://morgan.demo.com.9443/rm/types/_7VZDgWH6EeWyll2AMZ_Exp http://www.w3.org/2001/XMLSchema#string</p> |
| <p> ReqIF ID URI sameAs</p> | <p>Data Type matches existing system type _2fad2e47-8f97-4e46-bc7c-47f3dd863a3c https://morgan.demo.com.9443/rm/types/_7VS84WH6EeWyll2AMZ_Exp http://www.w3.org/2001/XMLSchema#int</p> |
| <p> ReqIF ID URI sameAs</p> | <p>Data Type matches existing system type _00000000-1111-2222-3333-12345boolean https://morgan.demo.com.9443/rm/types/_7U4tMWH6EeWyll2AMZ_Exp http://www.w3.org/2001/XMLSchema#boolean</p> |
| <p> Name ReqIF ID URI</p> | <p>Successfully imported data type HighMediumLow _b454be9f-4ad9-43e1-a619-7c4ecbe55b7e https://morgan.demo.com.9443/rm/types/_m9CN0WH7EeWyll2AMZ_Exp</p> |
| <p> Name ReqIF ID URI sameAs</p> | <p>Successfully imported data type Text _92a6137c-0630-43e4-96bc-9bab54b145d5 https://morgan.demo.com.9443/rm/types/_m-EIkWH7EeWyll2AMZ_Exp http://jazz.net/ns/rm/doors/type#text</p> |

- Included in the imported data are the DOORS® URI, DOORS® Object ID and the Link data

Migrated from DOORS 9.6.1.3 > 01 Requirements >

1172: Automated Meter Reader System Requirements

| ID | Contents | DOORS ... |
|------|---|--|
| 1173 | -1 Introduction | doors://localhost:36677/?version=2&prodID=0&urn=urn:telelogic:1-55e8927b049a0398-O-1-00000060 |
| 1174 | -1.1 Purpose of the Document | doors://localhost:36677/?version=2&prodID=0&urn=urn:telelogic:1-55e8927b049a0398-O-2-00000060 |
| 1175 | This document describes the specific functionality of the Automated Meter Reader system. The system is currently available with a handheld collection device. The mobile and fixed network methods of data collection are outside the scope of this system. | doors://localhost:36677/?version=2&prodID=0&urn=urn:telelogic:1-55e8927b049a0398-O-31-00000060 |
| 1176 | 1.2 Scope of the Software | doors://localhost:36677/?version=2&prodID=0&urn=urn:telelogic:1-55e8927b049a0398-O-3-00000060 |
| 1177 | 1.3 Definitions Acronyms, and Abbreviations | doors://localhost:36677/?version=2&prodID=0&urn=urn:telelogic:1-55e8927b049a0398-O-4-00000060 |
| 1178 | 1.4 References | doors://localhost:36677/?version=2&prodID=0&urn=urn:telelogic:1-55e8927b049a0398-O-5-00000060 |
| 1179 | 1.5 Overview of the Document | doors://localhost:36677/?version=2&prodID=0&urn=urn:telelogic:1-55e8927b049a0398-O-6-00000060 |
| 1180 | -2 General Description | doors://localhost:36677/?version=2&prodID=0&urn=urn:telelogic:1-55e8927b049a0398-O-7-00000060 |



Import from DOORS 9.6 1.4 > 01 Requirements >

2787: Automated Meter Reader System Requirements

| ID | Migration Object | Contents | satisfies |
|------|------------------|---|---|
| 2808 | AMR-SR-15 | -3 System Requirements | |
| 2809 | AMR-SR-58 | -3.1 Functional Requirements | |
| 2810 | AMR-SR-16 | | |
| 2811 | AMR-SR-39 | -3.1.1 Handheld device | |
| 2812 | AMR-SR-37 | The handheld device shall provide for the means for the meter reader to manually enter a meter reading. | 2947 The handheld device shall allow for the meter reader to collect |
| 2813 | AMR-SR-40 | The handheld device shall interfaces with the city's backoffice software. | 2949 The handheld device shall allow for upload of all information co |
| 2814 | AMR-SR-41 | The handheld device shall allow for programming of a defined route, advancing to the next meter on the route as the meter reader moves through the route. | 2951 The handheld meter reading device shall allow for programmin |
| 2815 | AMR-SR-42 | The handheld device shall have the ability to search for accounts by Last Name, Service Address, Meter Number, and Unread Meters. | 2950 The handheld device shall allow the meter reader to access ac |
| | | The handheld device shall have a screen capable of displaying the number of accounts that have | 2958 The handheld device shall have a screen that displays the nurr |

4. Post-Processing

Potentially, additional work can be done here to tidy up the type system and module structure if necessary. Once the data is reviewed, it is possible that process may need to be adapted to leverage the new functionality in DOORS® Next Generation.

About SyntheSys

SyntheSys provides defence systems, training, systems and software engineering and technical management services over a spectrum of different industry sectors. Along with distinct support and consultancy services, our innovative product range makes us first choice provider for both large and small organisations. Established in 1988, the company focus is on fusing technical expertise with intuitive software applications to solve common industry challenges.

