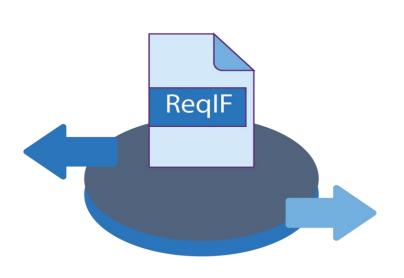






# **User Guide**

Version 3.2



REVISION HISTORY					
Rev. #	Date	Details	Revised By	Approved By	
Version 3.2	3 <sup>rd</sup> April, 2023	ReqIF Export section has been updated	Syed Hammad	Hammad Masood	
Version 3.1	14 <sup>th</sup> February, 2023	New section added "ReqIF4DevOps Installation (Azure Services)"	Syed Hammad	Hammad Masood	
Version 3.0	2 <sup>nd</sup> January, 2023	<ul> <li>Build Version information added on License window</li> <li>Added warning and error messages on Export Window</li> </ul>	Syed Hammad	Hammad Masood	
Version 2.0	27 <sup>th</sup> May, 2022	<ul> <li>System Requirements added</li> <li>ReqIF4DevOps extension deployment process added</li> </ul>	Syed Hammad	Hammad Masood	
Version 1.0	1st January, 2022	Version 1.0 Created	Syed Hammad	Hammad Masood	



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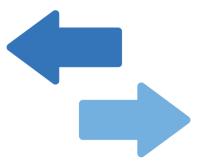
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# REQUIREMENTS INTERCHANGE FORMAT (RegIF)

For many years, requirements management has been an essential aspect of the development process in a variety of sectors (particularly in the software, aerospace, automotive, medical device, and military industries).

More manufacturers are now using specialized requirements authoring tools as disciplined requirements management has extended across the manufacturing industry. With this established discipline in place, suppliers and manufacturers wish to engage in collaborative requirements management, in which information can be consistently exchanged across companies up and down the supply chain.



The Requirements Interchange Format™ specification allows for the standard-based transmission of requirements defined in various Requirements Management (RM) tools and almost all RM and SysML modeling tools today support ReqIF import and export.

Two businesses in the manufacturing sector are seldom able to collaborate on the same requirements repository and, in some cases, do not use the same requirements authoring tools for technological and organizational reasons. To address this urgent industry demand for transferring requirements information across a number of companies, a generic and nonproprietary format for requirements information is needed.

To overcome this void and to bridge this collaboration gap between two companies, the use of a dedicated interchange format for requirements specifications can certainly come in handy.

- Adaptation of Requirements Management Systems across corporate boundaries promotes collaboration and effective management in partner firms.
- When it comes to compatibility, partner organizations are not bound to utilize the same requirements authoring tools, and suppliers need to have a multitude of requirements authoring tools to meet the needs of their customers.
- Even if different tools are used to author requirements, requirement information can be exchanged within an organization.

Requirement information is exchanged by exchanging XML documents that comply to the ReqIF format.

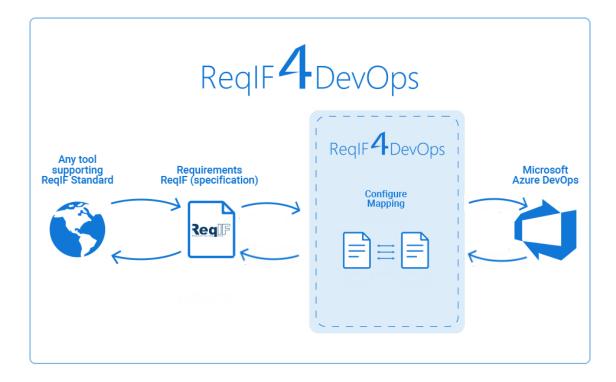


# WHAT IS REQIF4DEVOPS?

**ReqIF4DevOps** allows users to exchange their requirements and data with any tool that supports the ReqIF Standard. It enables the user to define mapping based on their needs while importing/exporting the requirements.

ADO users can now import/export requirements with a single click, thanks to ReqIF4DevOps. Not just that, anybody with a requirement authoring tool that supports the ReqIF Standard can export their requirements to Microsoft ADO, and, similarly, an ADO user can export their requirements to any other tool that supports the ReqIF Standard.

ReqIF4DevOps provides organized requirements data in the form of individual requirements that may be viewed in terms of attributes, structure, related elements, etc.

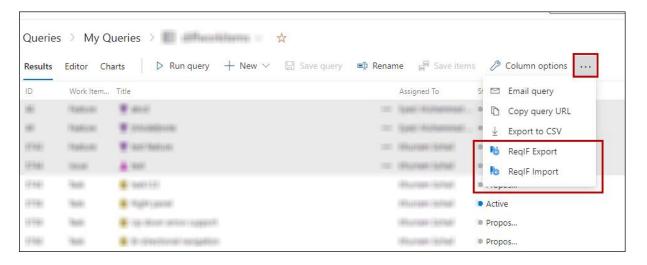




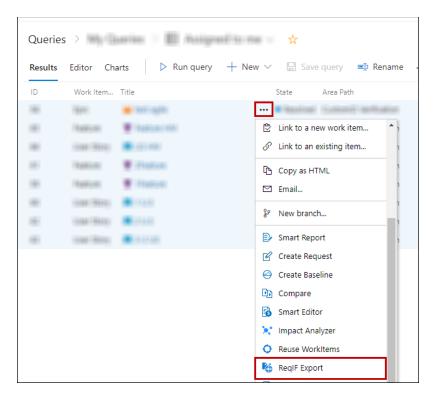
## **HOW DOES REQIF4DEVOPS WORK?**

The ReqIF4DevOps extension allows user to 'import' and 'export' requirements between ReqIF supporting tools, such as POLARION or any other tool.

Upon installing the ReqIF4DevOps extension in Azure DevOps, you can find the **ReqIF Export** and **ReqIF Import** options in the **Queries** tab as shown in the image below.



• To **Generate** or **Export** a ReqIF file for a particular work item, select "**ReqIF Export**" from the menu as shown in the image below.





### **INSTALLATION GUIDE**

### **SYSTEM REQUIREMENTS**

#### **GENERAL SOFTWARE REQUIREMENTS**

- 1. Operating System: Windows Server 2008 R2 or higher / Windows 7 or higher
- 2. Browser: Microsoft Edge, Internet Explorer 10 or higher, Chrome, Mozilla Firefox 47.0.1 or higher
- 3. Screen resolution: 1280 x 960 or higher
- 4. IIS 7 or higher
- 5. Microsoft .Net Framework 4.7.2 or higher
- 6. ASP.NET 4.5
- 7. Multilingual Support Language Pack for IE & Save as word

The credentials required for installing Modern Requirements4DevOps should include administrator rights on the machine. In other words, users installing Modern Requirements4DevOps on their machine should use admin credentials (or credentials that have admin rights) for proper installation.

For regular team projects, the user of a machine on which Modern Requirements4DevOps is deployed must have admin rights on the TFS Collection (or added in the application domain in IIS).

\*Note: To access GIT-enabled team projects, logged-In domain user of a machine on which Modern Requirements4DevOps is deployed must have authenticated rights on the TFS Collection (or added in Application Domain in IIS).

For using Modern Requirements4DevOps on HTTPS the application should be bound with a Trusted CA Signed SSL Certificate and not with a Self-Signed Certificate. Modern Requirements4DevOps is not compatible with the Self-Signed certificate and the user would be unable to proceed with it.

## **TEAM FOUNDATION SERVER REQUIREMENTS**

### ON PREMISES BUILD VERSIONS

Azure DevOps Server 2020 (Recommended)

## **CLOUD BUILD VERSIONS**

Azure DevOps Services

<sup>\*</sup>Note: Both the 32-bit and 64-bit versions of the operating systems are supported.



RegIF 4 DevOps

## HARDWARE REQUIREMENTS

- 1. RAM: At least 12 GB, but higher storage capacity is required if executing TFS work item queries greater than 100,000.
- 2. Hard drive space: 500 MB

# MINIMUM HARDWARE REQUIREMENTS FOR REDIS

According to Modern Requirements4DevOps, approx. memory usage per user is 477.8495 KB (0.4666 MB).

The maximum hard drive space required is 1.5 \* (memory size).

For instance, in the case of 8 GB of RAM, the maximum hard drive space occupied by Redis would be 12 GB.

A user should make sure his machine has sufficient hardware requirements for Redis.



# **REQIF4DEVOPS INSTALLATION (AZURE SERVICES)**

In the case of Azure DevOps Services, **ReqIF4DevOps** extension would be shared to your Azure DevOps (ADO) account. Users can view shared extension(s) on their accounts from the Shared extensions area.

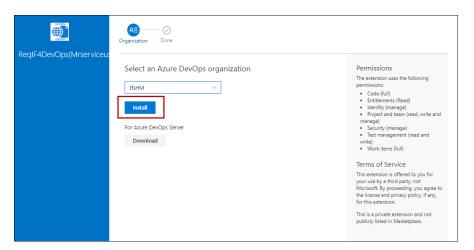
• To do so, the user has to log in to his/her ADO account with administrative privileges and navigate to the Extensions section. Once there, the user has to select the **Shared** tab and click on ReqIF4DevOps (Server Name).



• An installation window will appear. Kindly click on the "Install" button.



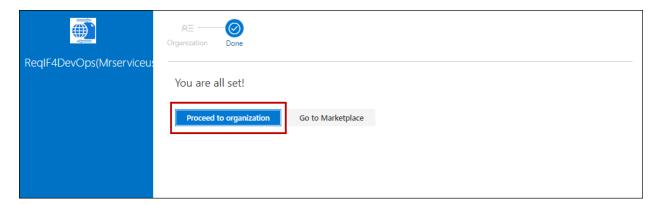
• The user will now be navigated to a new window that asks to "Select an Azure DevOps Organization". From the drop-down menu, kindly **select the desired organization** on which ReqIF4DevOps is required to be installed, then press the "**Install**" button.





# ReqIF4DevOps User Guide

• The ReqIF4DevOps extension will be installed on the selected Organization and a confirmation message will be displayed along with the option to "Proceed to organization".

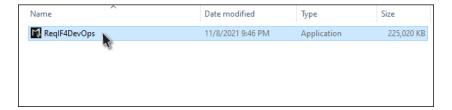




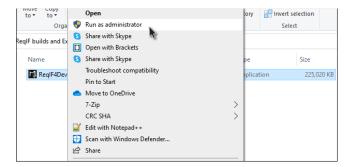
# **REQIF4DEVOPS INSTALLATION (AZURE SERVER)**

The process for installing ReqIF4DevOps is quite simple. Follow the below step-by-step guide.

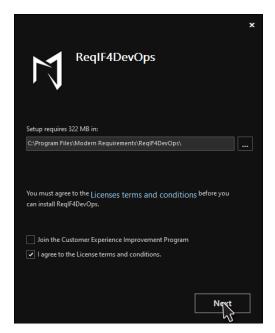
Right click the ReqIF4DevOps.exe file to start the installation process.



Select Run as Administrator

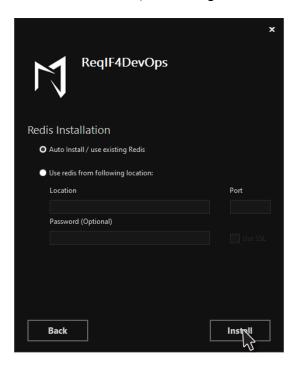


• The initial installation screen appears, asking the user to accept the **terms and conditions** for using ReqIF4DevOps. Agree to the T&Cs by selecting the **checkbox** and click on **Next.** 





• Select Auto Install / use existing Redis and click on the Next button.



• You will see the following screen telling you ReqIF4DevOps has been successfully installed. The user can click on the Finish button to close the installer.





• If you click on the **Run** option on the previous screen, you will see the following message indicating you that the ReqIF4DevOps Extension is up and running.

**Note**: By Default, the build will be installed on the local path of your machine utilizing the port 8029. If you aren't opting for a secure connection, you can copy the link and create the extension from this URL. However, in case a user opts to go for a secure connection using SSL (https), the extension will be generated using the secure URL along with the binding info.

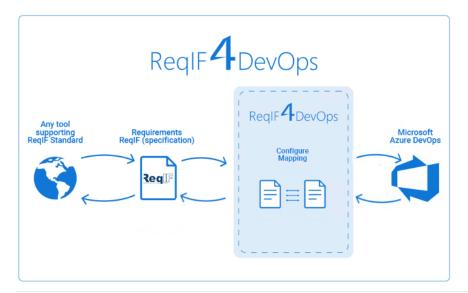
# ReqIF4DevOps service is running....(Build Version: 1.0.4)

## About ReqIF4DevOps

ReqIF4DevOps allows users to exchange their requirements and data with any tool that supports the ReqIF Standard. It enables the user to define mapping based on their needs while importing the requirements.

ADO users can now import/export requirements with a single click, thanks to ReqlF4DevOps. Not just that, anybody with a requirement authoring tool that supports the ReqlF Standard can export their requirements to Microsoft ADO, and, similarly, an ADO user can export their requirements to any other tool that supports the ReqlF Standard.

ReqIF4DevOps provides organized requirements data in the form of individual requirements that may be viewed in terms of attributes, structure, related elements, etc.

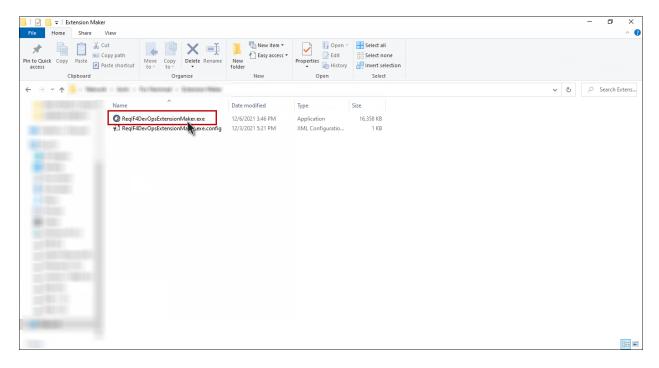




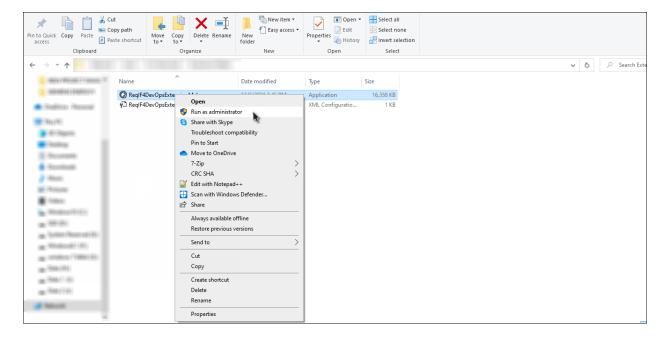
ReqIF4 DevOps

# **CREATING/ENABLING EXTENSION MAKER**

Navigate to the folder containing the file "ReqIF4DevOpsExtensionMaker.exe".

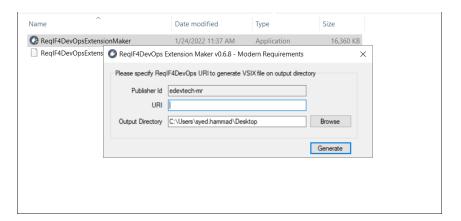


Right click on "ReqIF4DevOpsExtensionMaker.exe" and click on Run as Administrator.

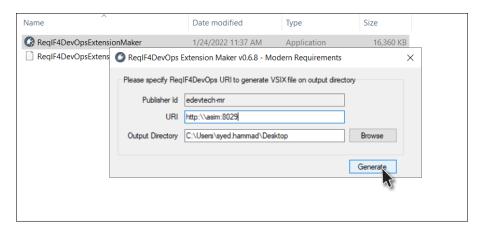




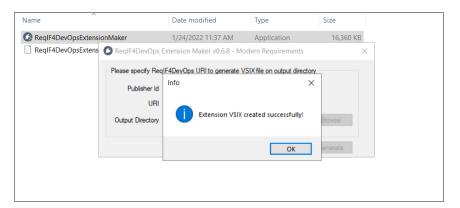
A ReqIF4DevOps Extension Maker window will now open, as shown in the image below.



• Provide the required information (i.e., URI and the Output Folder) and click on the **Generate** button. By Default, the ReqIF4DevOps installer installs the build on your machine's local path utilizing port 8029. If the user not using a secure connection, they can copy this link and create the extension from this URL. However, the majority of the organizations now prefer using **Secure Socket Layer (SSL)**. The extension then, therefore, is required to be created using a secure URL (https) along with the binding info.

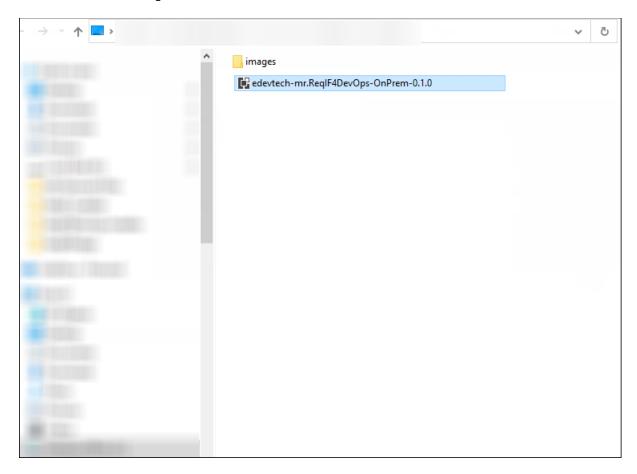


• Click **OK** button to close the confirmation dialogue box.





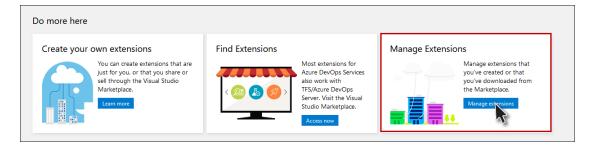
• VSIX File will now be generated at the desired location.



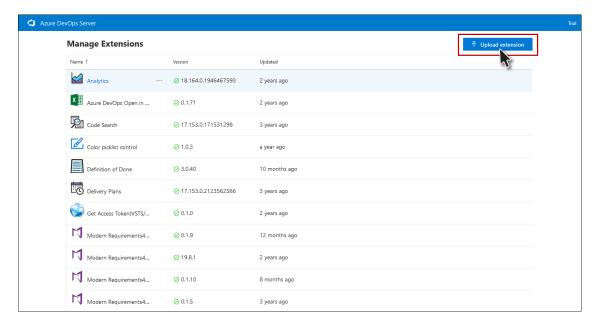


## **REQIF4DEVOPS EXTENSION DEPLOYMENT**

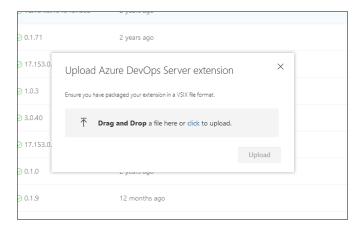
1. Go to Azure DevOps Server Extensions and scroll down to "Manage Extensions".



2. Click on the "Upload Extension" button on the top right corner.



3. Once you click on the "Upload Extension" button, the following pop up window appears for upload.

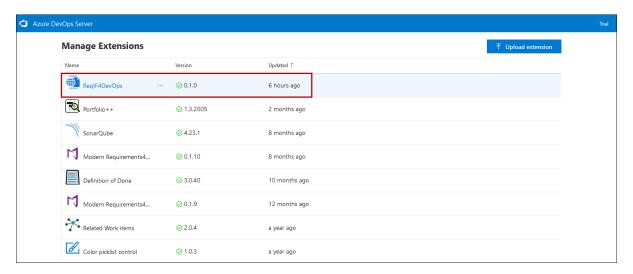




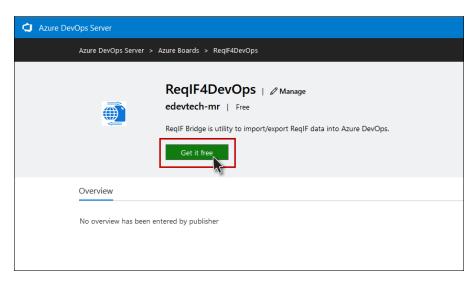
4. Now either **Drag and Drop** or **click** to upload the <u>VSIX file generated using the extension maker.</u> Now click on the "**Upload**" button.



5. **ReqIF4DevOps** will now be displayed in the Manage Extensions list. Click on it to navigate to the View Extension page.

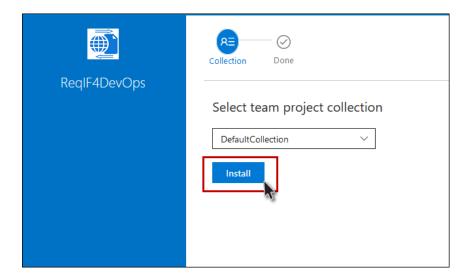


6. Click on "Get it Free".

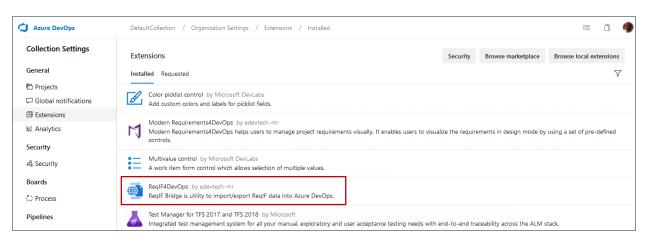




7. Now select the **collection** on which you want the ReqIF4DevOps extension to be installed and click on the **Install** button.



8. ReqIF4DevOps extension has been **successfully installed** to your desired collection.





## **RegIF EXPORT USING REQIF4DEVOPS**

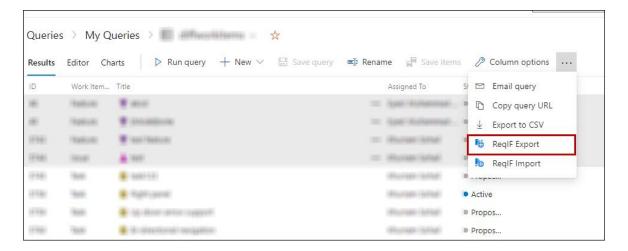
Using the **ReqIF4DevOps** Export Option, user can successfully export requirements from Microsoft ADO Server. The Exported requirements can be shared to any ADO account/server or requirements engineering tool that supports ReqIF standard.

To utilize this feature, navigate to the 'Queries' tab of ADO, click on the ellipse (...) on the Results Toolbar to have a drop-down menu containing additional options. Click on the **ReqIF Export** option. When the user performs ReqIF Export from the toolbar, it will consider all work items of the particular query in the export window.

Note: The Query needs to be saved otherwise it will consider all the work items present in the project.

The **ReqIF Export** option is also available for each individual work item in the Queries module as the user right clicks on it.

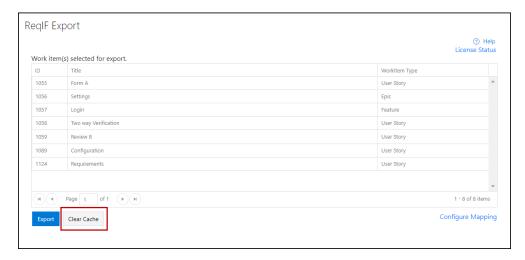
The ReqIF Export option can also be found in the **Backlog module** of ADO as a user right click on a particular workitem.



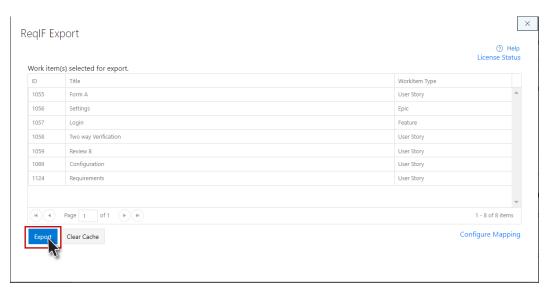


Before you start with the Export option, you might have to consider the 'Clear Cache' option. This option is
useful in scenarios where you have fetched a distinct set of workitem types in comparison to the already
cached one.

The User will be required to click on 'Clear Cache' in ReqIF Import too if the workitem types are different.

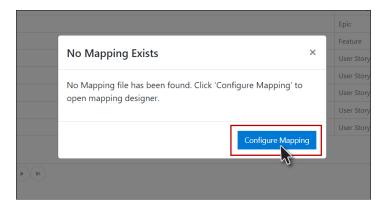


• ReqIF Export window is now open. Click on the "Export" button.

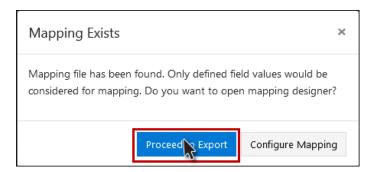




• If the ADO server does not find a predefined Mapping File in its repository, it will display the following dialogue box asking you to "Configure Mapping". Click on the "Configure Mapping" button.



Note: If the desired mapping file already exists and the mapping is not required you can Proceed to Export.

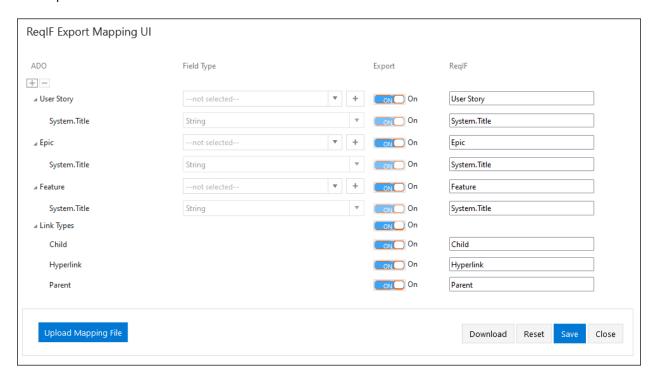






MODERN Requirements

• The **ReqIF Export Mapping UI** window is now opened allowing you to design the mapping as per the requirement.

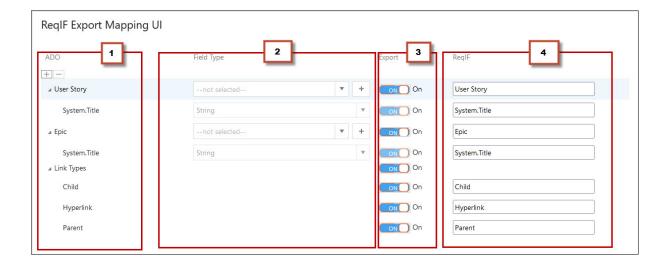




## **REQIF EXPORT MAPPING UI**

Mapping Designer UI will be populated by default with the mapping file already present on the server for the current project (if ReqIF4DO has been used for Import/export earlier, as its common for both). In case the user is accessing ReqIF4DO Export functionality for the first time and opens mapping designer, it will automatically populate the mapping data from the selected work items of ADO (for export). However, in case any existing mapping file is already present it will populate with existing mapping data and additionally automatic extracted information from selected work items (for export).

- 1. The first section of the ReqIF Export Mapping UI, "ADO", enlists the selected work items and field types to be exported.
- 2. The second section allows the user to select the required work item field and click on the "+" icon to add it below for defining its mapping.
- 3. The third section enables the user to control the work items and field types to be exported with the help of a **toggle button**.
- 4. The last section of the ReqIF Export Mapping UI, "ReqIF" allows you to customize the name of the work items and field types. This is usually effective in requirements exchange from ADO to another ReqIF supporting requirements authoring tool. By default, it is identical to the ADO section (First section of the ReqIF Export Mapping UI).

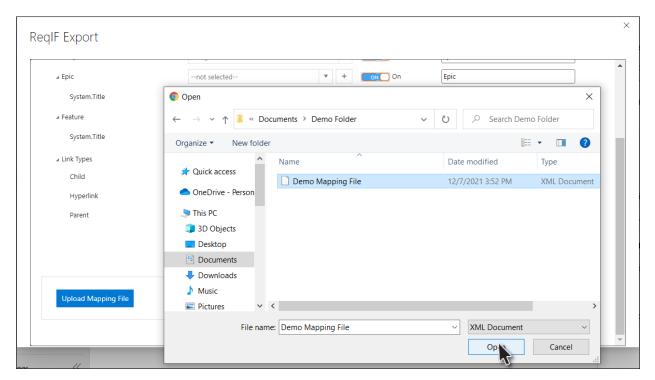




• If you already have a mapping file, then click on the "Upload Mapping File" button as show in the image below. This option allows you to use predefined mapping file or make alterations as per your requirement.

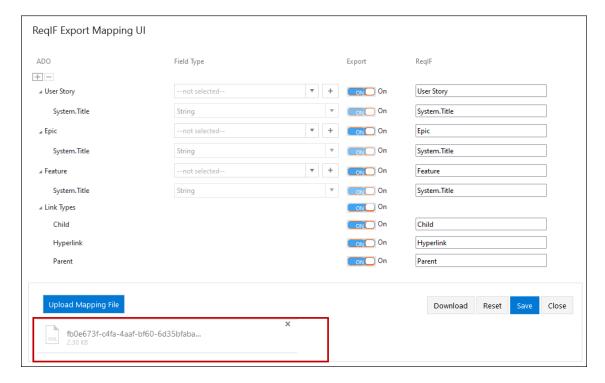


• As you click on the "Upload Mapping File" button, the following window appears. Select the desired mapping file and click "Open".





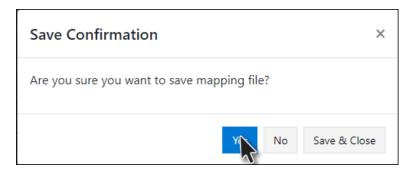
• Your selected mapping file has now been uploaded. You may want to use it as it is, or you may make some changes depending upon the requirements.



• Once you are done with the Export Mapping, click on the "Save" button.

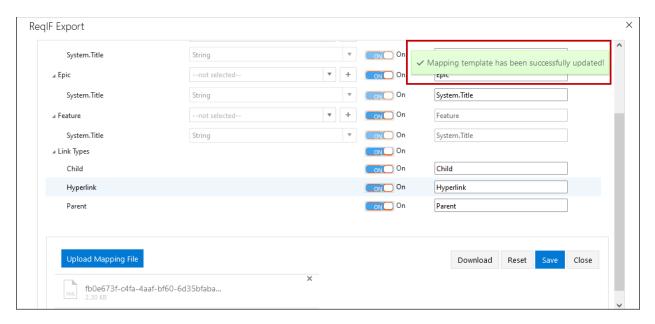


• A dialogue box will appear confirming if you want to save the mapping file. If you are sure, click on the "Yes" or "Save & Close" button.

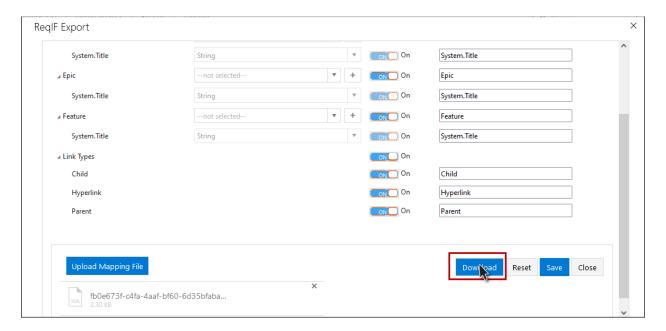




• The new mapping template has now been successfully updated.

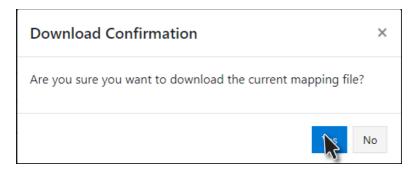


• For any ReqIF export in the future, you can have the mapping template downloaded. Just click on the "Download" button.

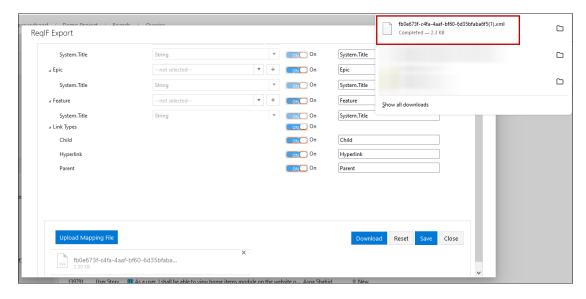




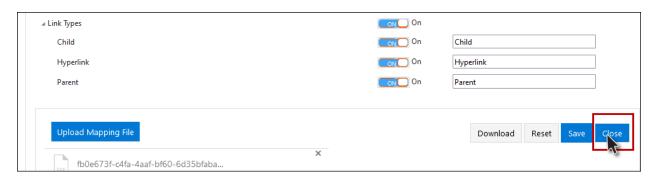
A dialogue box will appear asking for download confirmation. Click on "Yes".



• You have now successfully **downloaded** the latest mapping template.



Now click on the "Close" button to close the "ReqIF Export Mapping UI" window.





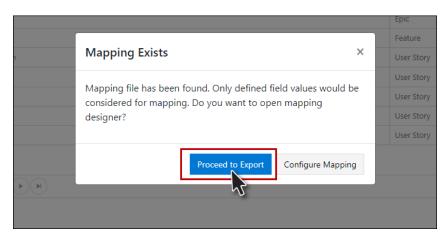
• Click on the "Yes" button to close the mapping designer.



• Now when you are done with "Configure Mapping", you need to click on the "Export" button again.



When you have configured the mapping or you have a preexisting mapping file in the ADO server you would
like to use to, the following dialogue box will appear. Click on the "Proceed to Export" button to continue with
ReqIF Export.

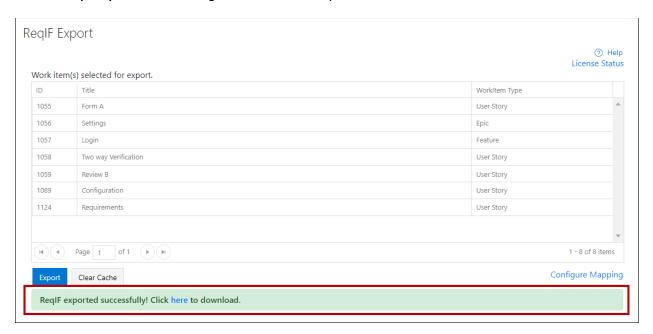




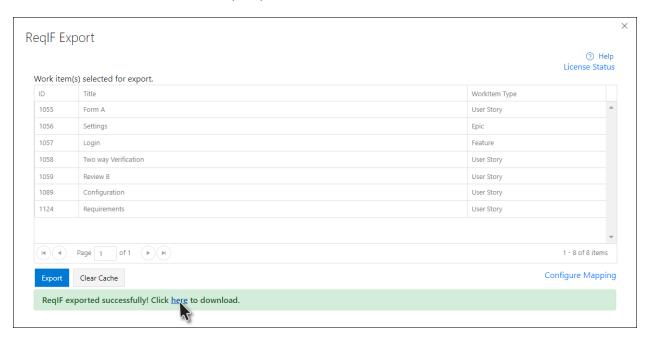
## ReqIF4DevOps User Guide

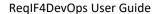


• The ReqIF Export file has been generated and is ready for download.



Click on "here" to download the ReqIF export file.

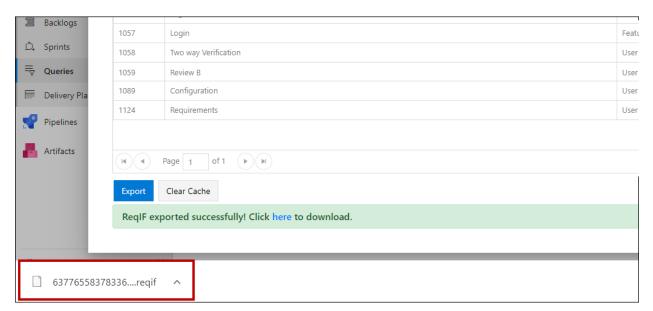






ReqIF4 DevOps

• The ReqIF Export file has been **downloaded successfully** and can be exchanged across organizations having requirements authoring tools that support ReqIF standard.

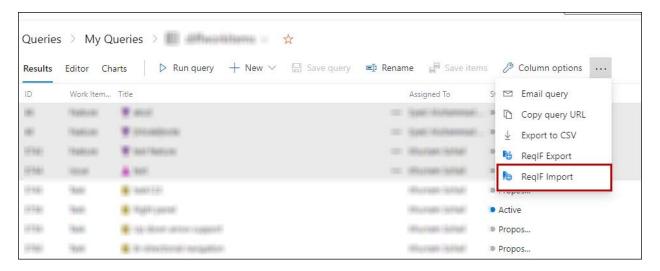




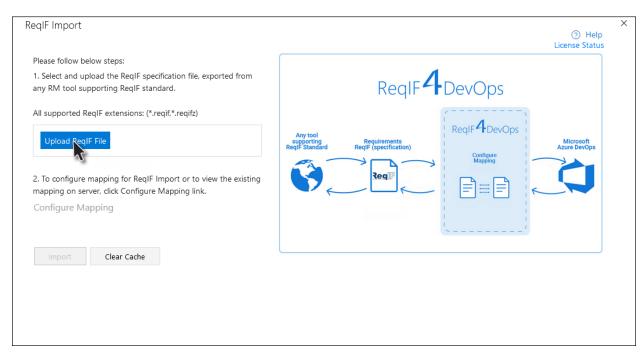
# **RegIF IMPORT USING REQIF4DEVOPS**

Importing requirements via ReqIF4DevOps from an ADO server to another ADO or an external requirements engineering tool is quite a straightforward process.

To import a ReqIF file, go the **Queries** section of the ADO server and select the **ReqIF Import** option from the drop down as shown in the image below.



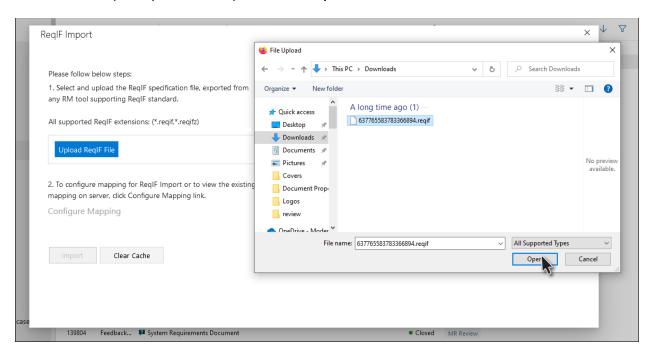
• Click on the "Upload ReqIF" button.



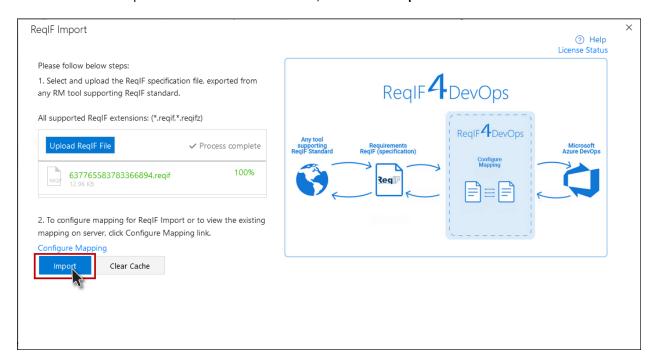




Select the ReqIF File you want to import and click "Open".

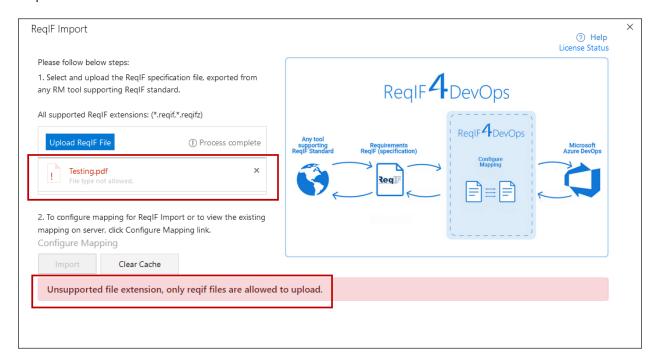


Now that the RegIF standard file has been selected, click on the "Import" button.



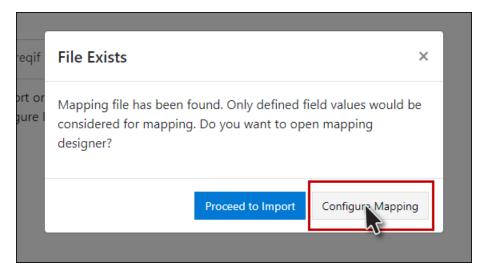


**Note:** You can select and upload only a ReqIF specification file, exported from any RM authoring tool that supports ReqIF Standard.



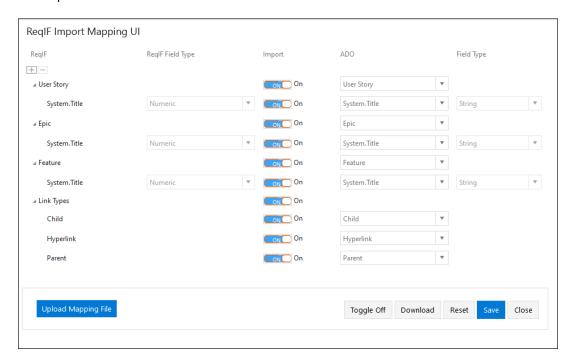
• As you click on the "import" button, the following dialogue box appears asking you to either "Proceed to Import" or review the "Configure Mapping".

Note: If the desired mapping file already exists and the mapping is not required you can Proceed to Import.

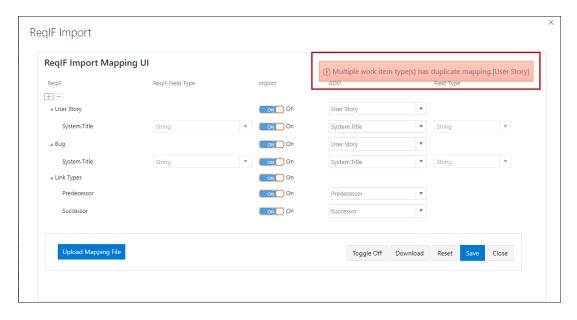




• The **ReqIF Import Mapping UI** window is now opened allowing you to design the mapping as per your requirement.

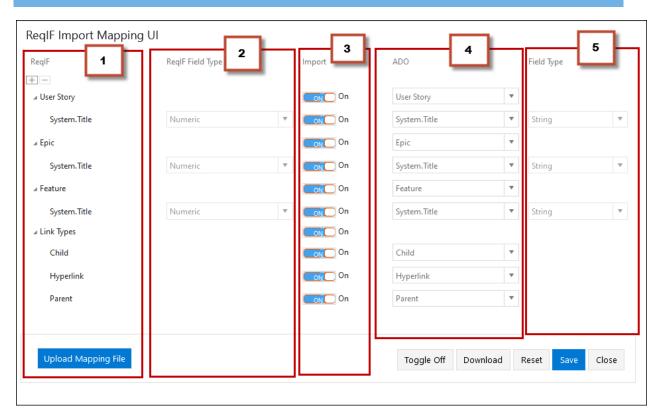


**Note**: During import, a user cannot bind two different ReqIF objects on a single/same workitem type. If this happens, a **Duplication Error** will be displayed on the screen. The same applies to Workitem field types. If a user tries to bound with single/same workitem field, a duplication field not allowed message will be displayed on the UI.





# **REQIF IMPORT MAPPING UI**



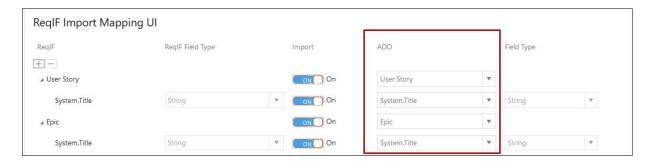
- 1. The first section of the ReqIF Import Mapping UI is named ReqIF. It entails the work items fetched from the ReqIF specification file exported from any requirements authoring tool that supports the ReqIF standard.
- 2. The second section of the ReqIF Import Mapping UI represents the data type of the added field.
- 3. The third section of the ReqIF Import Mapping UI allows to control which work item and field type you want to import with a use of a toggle button.



4. The fourth section named "ADO" allows to map work items and fields fetch from the exported file to same or any other work item type or field in the ADO server. For example, in the image below, the 'User Story' work item and 'System. Title' field have been mapped against "Feature" Work item type and "System.AreaPath"



field respectively.

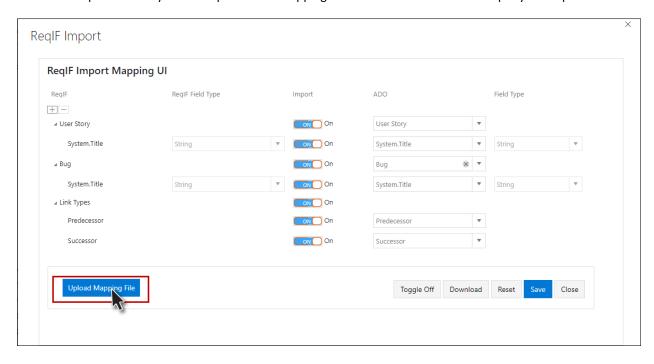


5. The fifth section is of "Field Type" that is set to "String" by default.

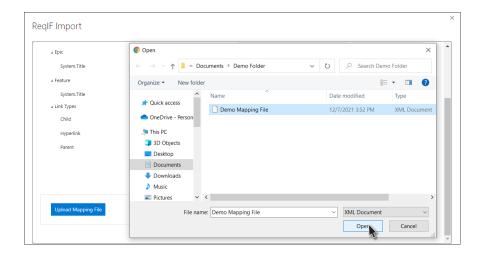




• If you already have a mapping file, then click on the "**Upload Mapping File**" button as shown in the image below. This option allows you to use predefined mapping file or make alterations to it as per your requirement.



• As you click on the "Upload Mapping File" button, the following window appears. Select the desired mapping file and click "Open".





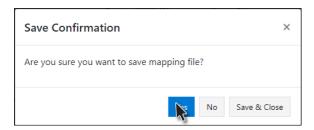
• Your selected mapping file has now been uploaded. You may want to use it as it is, or you may make some changes depending upon the requirements.



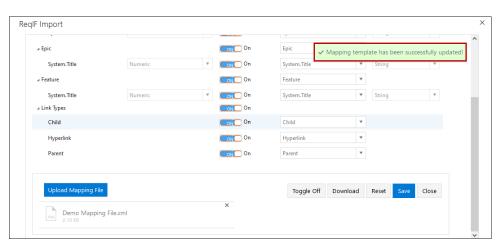
• Once you have configured import Mapping, click on the "Save" button.



• Click on "Yes" to confirm saving the mapping file.



• The new mapping template has now been successfully updated.





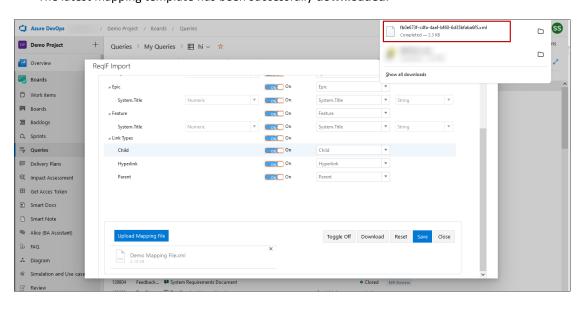
• For any future ReqIF import, you can have the mapping template downloaded. To do this, just click on the "Download" button.



• Click "Yes" on the dialogue box to confirm the download.

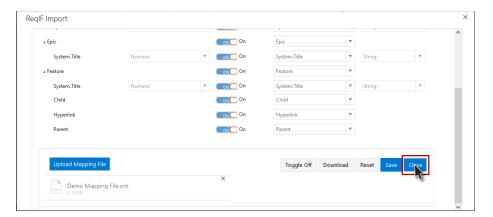


• The latest mapping template has been successfully downloaded.

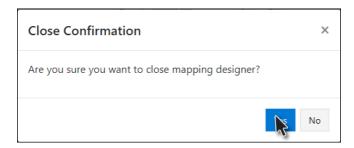




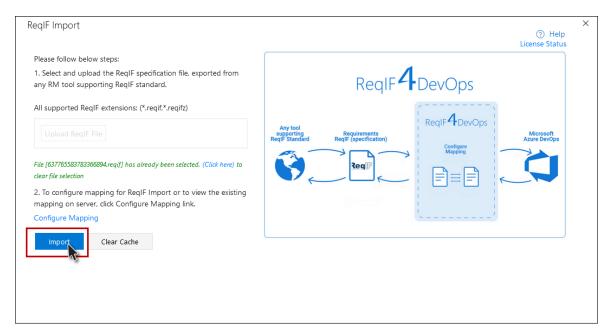
Now click on the "Close" button to close the "ReqIF Import Mapping UI" window.



• To confirm closing the mapping designer, click on "Yes".

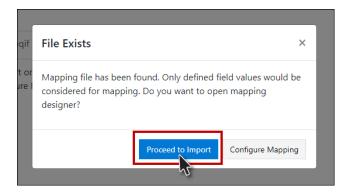


• After configure mapping, you need to click on the "Import" button again.

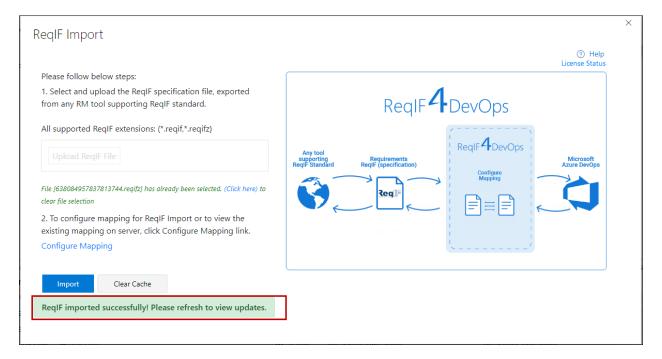




When you have configured the mapping or you have a pre-existing mapping file in the ADO server that you
would like to use, the following dialogue box will appear. Click on the "Proceed to Import" button to continue
with ReqIF Import.



• The ReqIF has been imported successfully.

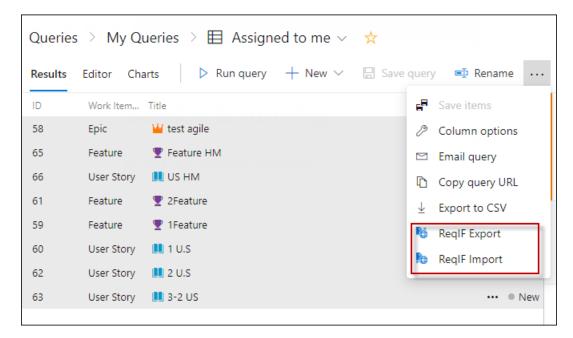




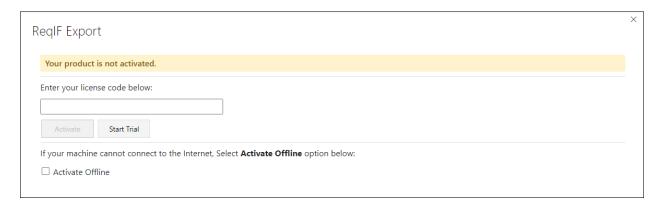
# **LICENSE ACTIVATION**

#### **ONLINE ACTIVATION**

• For "Online Activation" of ReqIF4DevOps, go to the Queries section on ADO server and select "ReqIF Export" or ReqIF Import" from the drop down as shown in the image below.



 Now you will see the following screen, which prompts the user to either enter your license code or "Start Trial".



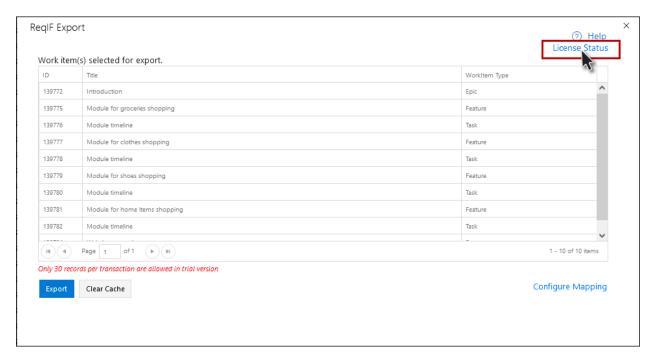


## TRIAL VERSION

• If you want to use the trial version of ReqIF4DevOps, click on the "Start Trial" button. Once you click on the "Start Trial" button, your trial usage of ReqIF4DevOps gets activated.

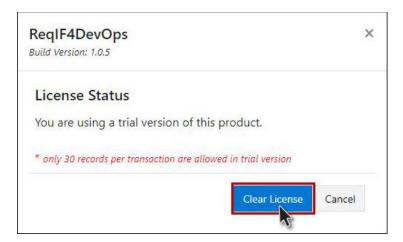


• If you have a **license code** for ReqIF4DevOps, you can opt out of the trial version at any given time by clicking on the "**License Status**" option, as shown in the following image.

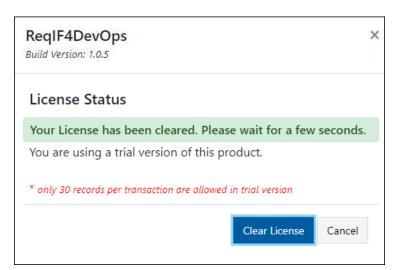




• Click on the "Clear License" button to opt out of the ReqIF4DevOps' trial version.



• Your "Trial version" of ReqIF4DevOps is now cleared.



**Note:** The same procedure is to be followed to clear an activated license.

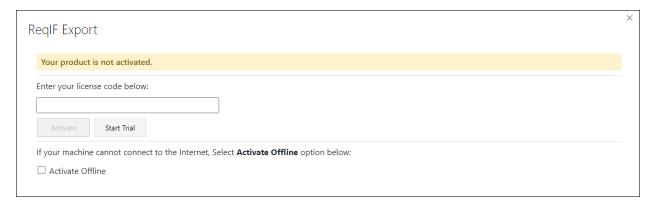




## **ACTIVATED VERSION**

If you have been provided with the license code, activating ReqIF4DevOps is quite an easy process.

• Enter the "License Code" in the below text box.



• Once the license code has been entered, click on the "Activate" button.

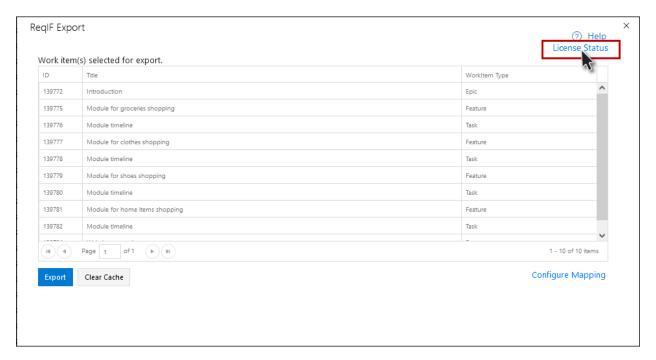


Your product has now been successfully activated.

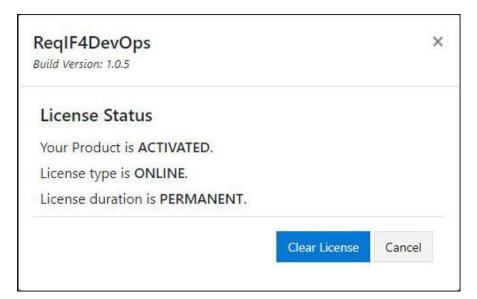




• At any time, you can check the status of your license by clicking on the "License Status" option in ReqIF Export/ReqIF Import window as shown in the image below.



• You can now see your License Status.



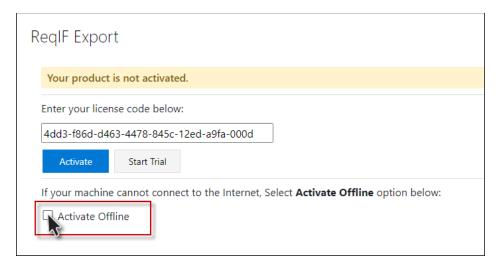




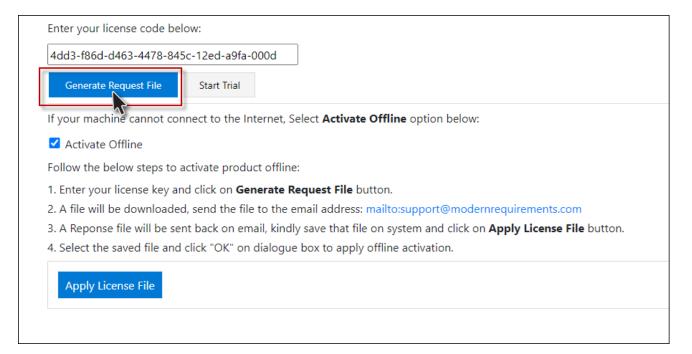
#### **OFFLINE ACTIVATION**

If the machine cannot connect to the internet, users can opt for the **Activate Offline** option.

• Select the **Activate Offline** check box after entering the license key.

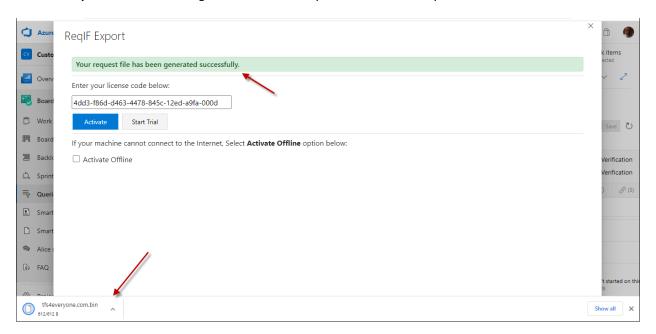


• Click on Generate Request File





• The **Request File** will now be generated successfully and downloaded to your machine.



- Once the Request File has been download, send the file to the e-mail address:
   mailto:support@modernrequirements.com
- A Response file will be sent back on e-mail
- Save the file on your system and click on **Apply License File** button
- Select the saved file and then click **OK** on the dialogue box to apply offline activation



• Click on the "Apply License File" Button, select the saved file, and then click "OK" on the dialogue box to apply offline activation.

