Modern Requirements4DevOps

Modern Requirements4DevOps
2023 Release Notes

Modern Requirements
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1. **Introduction**

This document contains the notes for the 2023 release of Modern Requirements4DevOps (MR4DevOps). It describes the key features and enhancements of each module in the Modern Requirements4DevOps application. This includes Smart Docs, Smart Note, Alice (BA Assistant), FAQ, Diagram, Mock-up, Use Case, Review Management, Trace Analysis, Baseline, Reporting, Smart Reporting, and Impact Analysis.

2. **System requirements**

   **Software Requirements**
   
   1. Operating system: Windows 7 or higher, Windows Server 2008 R2 or higher
   2. Browser: Microsoft Edge, Google Chrome, Mozilla Firefox47.0.1 or higher and Internet Explorer 10 or higher
   3. Screen resolution: 1280x960 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

Please note the following:

- Both the 32-bit and 64-bit versions of the operating systems are supported.

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

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

Also note that to access GIT-enabled team projects, the logged-in domain user of a machine on which Modern Requirements4DevOps is deployed must have authenticated rights on TFS Collection (or added in the application domain in IIS).

**Supported Team Foundation Server**

1. Embedded build version
   - **Standard**: TFS 2015 update 2+ and higher
   - **Single Sign-on**: TFS 2017 update 3, 2018 update 1 and higher

**Supported Microsoft Word versions for Word Import**

1. Microsoft Word 2010 or higher (With the .docx, .dotx, .docm, .dotm file extensions)
**Hardware requirements**

1. At least 12GB of memory is required - more memory is required if executing TFS work item queries greater than 100,000.
2. Hard drive space of 500 MB.

**3. Application setup**

Refer to the “Modern Requirements4DevOps Installation Guide.docx” for installing the application.
1. Tool Enhancements

1. The root work item of a file having ‘read-only’ description field will be non-editable

   If the description field is read-only of a root work item of an associated diagram, simulation, and smart note file, then user will not be able to edit the file from MR application and will be prompted with a notification message accordingly.

2. Able to create link with related link type when ADO restricts on any link type on copy file

   When a diagram file in which there are new or existing links are linked with a link type “Child” and then this file is copied in another folder, the respective link will now be created with “Related” link type (since ADO doesn’t allow a work item to have multiple “Parent” link work item), this holds true for any link type that ADO restricts on file copy operation. This is supported in “Diagram”, “Simulation” and “Use case” modules.

3. Users can now replace ‘same name’ templates with the same name

   Users will be able to replace the template with the same name through the “Save As Template” option on the toolbar in the Reporting, Smart Note and FAQ module. A message shall prompt if user wants to replace the same name template.
1. **New Features**

   1. **Static smart document properties in generated reports**

       Users can now configure to add “System” defined properties for a smart document to be shown in the generated “Word/PDF/PDF as word template” reports through “Smart Report” and save as “Word/PDF” reports from Smart Docs tool bar. Users can add system defined properties through the “Document Define Properties” section in admin panel through the “Add” option in the respective section.

       The property name shall be the same as defined in the uploaded word template while generating above mentioned reports.

2. **Tool Enhancements**

   1. **Read-only fields check for cloning in Smart Docs module**

       Users can now configure and add any read-only from admin panel in “Disregard Read-only fields when copying/cloning work items from baseline/other places” section. The added read-only fields will be ignored by the system when a Smart Docs file is cloned.

3. **Bug fixes**

   1. Fixed an issue where proper message was not showing when a project is already mapped to the repository but user tries to map another repository with the same project.
1. **New Features**

1. **Create and view links to new and existing work items from the ‘Links’ tab in the right panel**

   Users will now be able to view the links of a work item selected from Smart Docs grid in the right panel ‘🔗’ (Links) tab and will also be able to create links to new or existing work items through the ‘Add Links’ option in the right panel toolbar options. Users can also toggle between grid view and list view for the links displayed in the respective tab in right panel.

2. **Add/remove work item field columns in the Smart Docs grid through column options**

   Users will now be able to add the work item field column(s) in the Smart Docs grid configured through the right panel “✍” (Column Options) tab in the document tab and will also be able to change the position of the columns on the Smart Docs grid by drag and drop the fields in the right panel tab. By default, three columns are non-editable and no operations (delete, drag and drop) can be performed on it, out of two (ID & Type) columns are with toggle buttons the “ID” column button by default set to “On” and “Type” column button by default is set to “Off”. In addition, the toggle buttons for “ID” and “Type” have been removed from UI and are now included in “Column Options” tab.

   Options like ‘Insert’ and ‘Search’ have also been removed from tool bar and are now included in a new dropdown of ‘Right Panel’ with new options like ‘Add Links’ and ‘Column Options’ and existing option like ‘Smart Editor’.

2. **Set the permissions for Smart Docs/Review versions under different group features.**

   Users are now able to set permissions from “Permissions” tab to "Allow, Deny, Not set" on new group features “Create Version”, “Delete Version”, and “Rollback Version” features of Smart Docs/Review versions, “Open version” is independent of rights management. By default, permissions are set to "Allow" in the "Project Valid Users" group and "Allow (inherited)" permission is inherited in all its child groups. When "Deny/Not set" permissions are set, users will not be able to create, delete and rollback a version and the respective feature buttons are shown disabled.

3. **Static smart document properties in generated reports**

   Users can now configure to add “System” and “User” defined properties for a smart document to be shown in the generated “Word/PDF/PDF as word template” reports through “Smart Report” and save as “Word/PDF” reports from tool bar. Users can add system defined properties through the “Document Define Properties” section in admin panel and user defined properties through the “Document Properties” option on the tool bar of Smart Docs module.
The property name shall be the same as defined in the uploaded word template while generating above mentioned reports.

2. Tool Enhancements

1. Configure default and show properties for root work item

Users will not be able to configure “Default Properties” and “Show Properties” from “Meta Template Designer” on “General Settings” level (root work item). The configured settings will be reflected on the Smart Docs grid and generated Word/PDF reports as well, as it currently works on work item level.

2. Users restricted from cloning the document when permissions are denied

Users will not be able to clone work items through a Smart Docs file across projects/teams where permissions are denied for the current user from MR “Permissions” tab under ‘Smart Docs’ section and ‘ADO’ permissions. In both cases a notification message is prompted to the user on the clone pop-up when clicking the ‘OK’ button.

3. Renaming of ‘Save As Template’ feature

‘Save As Template’ feature on tool bar has now been replaced with “ ” with a tooltip ‘Save As Document Template’.

4. Enhancement in change work item type functionality

Whenever users change the type of work item(s) and the message displays on Smart Docs grid, the message will now be shown only one time and will not be shown again, every time the same Smart Docs file is opened.

5. Drag & drop on multiselected work items

Users will now be able to perform ‘drag and drop’ in bulk by multi-selecting the work items on grid and dropping it in the desired hierarchy or position. These multi-selected work items can also be re-ordered if allowed, according to the meta/document/process template configurations.

6. Enhancements in Smart Editor for body text & numbered list, additional cell background colors, image, and table captions

1. Body Text

A new style “Body Text” has been added under “Paragraph Style” drop down on the tool bar of Smart Editor. It includes attributes like Font Family: Times New Roman, Font Size: 12 etc. The applied style will be shown in Smart Editor, Smart Docs grid, Smart Report (including generated Word/PDF as Word template reports) and Save as Word/PDF from Smart Docs tool bar as well.

2. Numbered List

A new list “Numbered List” has been added under “Ordered List” drop down on the tool bar of Smart Editor. It includes numbering like [1], [2], [3] etc. The applied numbering will be shown in Smart Editor, Smart Docs grid, Smart Report (including
generated Word/PDF as Word template reports reports) and Save as Word/PDF from Smart Docs tool bar as well.

3. **Cell Background Colors**
   Users will now be able to apply all the additionally added colors from the color palette of the "Background color" option on the toolbar and the "Cell Background" option in the properties pop-up of table options.

4. **Image caption**
   As users can currently apply image caption from Smart Editor, now this caption will be shown with image label and numbering in the generated Word/PDF as Word Template reports from Smart Report and Word/PDF from tool bar and users will be able to generate table of figures for it as well.

5. **Table Caption**
   Users will now be able to apply table captions through the ”Table Caption” option provided in the table properties pop-up. The caption will be shown in Smart Editor and Smart Docs grid as well. This caption will be shown with label and numbering in the generated Word/PDF as Word Template reports from Smart Report and Word/PDF from tool bar and users will be able to generate table of table for it as well.

7. **UI Updates on tool bar of Smart Docs**

   The following UI changes have been applied:

   1. "Save as template” option on tool bar is now replaced with an icon with tool tip “Save As Document Template” on it.
   2. "Review” and “Baseline” options on tool bar have now been replaced with icons with tool tip "Review” and "Baseline” respectively.

8. **Generate a Smart Report for the Smart Docs versions tab in the Smart Docs module.**

   Users can now generate a Smart Report from the toolbar option in the opened version. This option is provided for both types of versions, versions that are created manually from Smart Docs and the versions of review.

9. **Enhancement for ‘Add Content’ pop-up in the Word Import Ruleset designer.**

   Users can now see the UI updates in the ‘Add content’ pop-up. The labels of each field are now updated and added information icon next to each field. Users can now select ADO field (Work item type, Work item field & Field value) from the dropdown in the pop-up against the ADO field dropdown. Its value can be set in the dropdown next to it.

4. **Bug fixes**

   1. Fixed an issue where the remove functionality in the Smart Docs toolbar was not working when Smart Docs file contained ‘&’ in the title.
   2. Fixed an issue where on cloning a Smart Docs file, work item field data was not being copied in the cloned file if there was any read-only field in it.
3. Fixed an issue where work item field values set by the user from ADO editor were not showing the same when the Smart Docs file was cloned from one project to another.
4. Fixed an issue where on editing the work item with title having characters like “>” and “&”, the respective characters were changing to html format.
5. Fixed an issue where on importing a word document from Word Import, bullet points inside the table were not visible on the Smart Docs grid.
6. Fixed an issue where indented lists were not mapped properly on the Word Import preview window.
7. Fixed an issue where the defined “Usecontent” was mapping incorrectly in the heading hierarchy.
8. Fixed an issue where the new ruleset file was not creating on pressing “Enter”.
9. Fixed an issue where the ‘Save’ button was not showing enabled when adding the values in the textbox in the right panel of Ruleset designer.
10. Fixed an issue where the “Usecontent” was inheriting across hierarchy in the rows/columns when defined on a single column.
11. Fixed an issue where the “Refresh” & “Comment” Buttons in the ... dropdown were not showing on the Smart Editor tab in right panel.
12. Fixed an issue where the bullet style applied from ADO Editor was not showing in Smart Editor and on the Smart Docs Grid.
1. New Features

1. Rights Management for Review

Admins can now restrict access of ADO Project groups in Review Management on different levels. Groups can be allowed or denied based on different features of Review. These features include 'Initiate/Update Review,' 'Audit Report' generation, 'Smart Report' generation, 'Smart Report' designer, 'Upload Template' and 'Delete Uploaded Template.'

2. Tool Enhancements

1. Review Initiator can now add Users in group as stakeholder while creating Review

While initiating or updating the review; the review initiator can add users as groups. These groups shall be defined on project level in ADO. Initiator can search for these groups in Approvers or Reviewers list. Groups will appear with group icon and users will appear with user’s icon with their name in the search field. Stakeholders added as groups will have group icon and their name in blue along with their domain and display name on hover. These group members can be dragged and dropped and can be deleted.

2. Review requested from Smart Docs view tab shall inherit all the meta configured properties and hierarchy

Reviews created from Smart Docs have their work items hierarchy and Meta configured properties intact. These properties can be copied into new reviews as well, while requesting a new review from Smart Docs view tab for the review that were initiated from Smart Docs.

3. Review Initiator can view and filter all the responses provided on a Review

Review Initiator can now view and filter all the responses given in a particular review. Initiator can apply filter to this response and filter them according to the 'Work Item' type, 'Response By' and 'Action.'

4. Reviewer can now provide multiple 'Submit Review' comments via Submit Review option

Reviewers can now give multiple 'Submit Review' comments via 'Submit Review' option until review is closed. Users can provide 'Review Action,' 'Comments,' and 'Links' with these additional 'Submit Review' comments.
3. Bug fixes

1. Fixed an issue when downloading Smart Report was not possible if the review subject contained special characters.
2. Fixed an issue where 'Open in Smart Docs' icon was appearing with 'Open in Smart Docs' text on the toolbar
3. Fixed an issue where there was a spelling mistake appearing on the error message while applying the pre-state and post-state rule
4. Fixed an issue where User's ID were appearing on the “To” field of email on resend reminder even if they were removed from the review
5. Fixed an issue where on changing the 'Due Date' and the 'Clear Due Date' was enabled on the Update Review window even after unchecking the “Allow review initiator to extend due date” and “Allow review initiator to clear due date” checkboxes
6. Fixed an issue where the toast message was not appearing on a single line beside the icon
7. Fixed an issue where “Rollback on Compare” pop-up was showing the `-1` revision option in the “Rollback to Specific Revision” dropdown
8. Fixed an issue where the 'Review' reminder window remained open even after clicking on ‘Send’ button after clearing the due date
9. Fixed an issue where HTML tags were showing with a title on the ‘You are temporarily blocked’ popup on attempting the wrong credentials multiple times on approval
10. Fixed an issue where 'state transaction failed' email was not received by the users added
11. Fixed an issue where the Review created with special characters was not showing the Review participant
12. Fixed an issue where 'Reviews' on which response was provided by all stakeholders or which were marked completed were showing under the Active Approval section
13. Fixed an issue where 'Compare' was not showing proper comparison on the first revision of the work item
14. Fixed an issue where the 'Review' grid was showing continuous loading when special characters were added in the 'Review Response' action in the admin panel
15. Fixed an issue where 'Reviewed' status was showing against the revision without submitting a response by stakeholders if the Review was closed by the due date/Manually
16. Fixed an issue where preconfigured roles were still showing on the preview window even after removing it while creating a review
17. Fixed an issue where continuous loading was showing on the screen when ‘Approve all’ was performed
18. Fixed an issue where the Reviewer was unable to download the legacy report and an error message was shown
19. Fixed an issue where server time was shown in the response panel instead of end-user time
20. Fixed an issue where the legacy report was showing created date and time even after changing the UTC checkbox from the admin panel
21. Fixed an issue where admin configured date pattern did not apply in email or detail tab comment
22. Fixed an issue where continuous loading was shown on create request window when any user visits the Review module for the first time
23. Fixed an issue where stakeholders did not receive the review reminder email
24. Fixed an issue where an incorrect date and time pattern was shown in the review legacy report
25. Fixed an issue where it was taking longer than expected to create a review
26. Fixed an issue where the post state of Work Item was not updating on approval from all stakeholders
27. Fixed an issue where a comment was saved in another ‘Review’s Work Item’ when switched without saving the comment
28. Fixed an issue where legacy audit report was showing incorrect responses statuses
29. Fixed an issue where email was not received by users added in ‘Review Post State Rule’ in admin panel
30. Fixed an issue where links were not showing on compare popup for previous revision when deleted/removed
31. Fixed an issue where ‘Signature required’ was showing in the legacy audit report under review details heading
32. Fixed an issue where position of submit comment was changing when response panel was refreshed.
1. New Features

1. **Document define properties can now map to the relevant uploaded Word template while exporting the document**

Document properties can now be mapped to the relevant uploaded Word template while exporting the document. These properties can be either system-defined or user-defined. System-defined properties include Collection Name, Created By, Created Date, Project Name, Team Name, Document Title, Document URL and Document Version. While for user-defined properties, field name and value can be defined by the users from Smart Docs.

2. Tool Enhancements

1. **Rights Management for Smart Report**

Admins can now restrict access of Smart Report functionalities in the different group features such as Smart Docs, Baseline, Review, Trace Analysis, and Reporting on the different levels. Groups can be allowed or denied on both the features i.e., Upload and Deleted upload template of Smart Report.

2. **Smart Report can now support update Table of Tables and Table of Figures in exported document**

Smart Report now supports ‘Table of Tables’ and ‘Tables of Figures’ in the exported Word/PDF documents. These properties shall be supported in the uploaded templates and ‘Table of Tables’ and ‘Table of Figures’ can be automatically updated as the document is exported if the document contains table or figure captions.

3. **Set filter option for Test Run Virtual work item**

Users can now apply different filter options to fetch Test Run data more efficiently and quickly. Users can filter the data by providing Start and End date, State, Count, manual or automated runs on the Test Run configuration pop up provided in the Designer tab.

4. **Support of Build number property against Test Case API virtual work items**

Users can now view “Build number” property on trace analysis grid under Test point, Test Run and Test results virtual work items when added through column options.

3. Bugs fixes

1. Fixed an issue where the system fields that contain “I” in their names were not populating on the reports in the Turkish language.
2. Fixed an issue where the Smart Report generated from Smart Docs and Test Hub was showing different numbers of test runs.
3. Fixed an issue where “Select file does not exist” message was appearing while deleting the report part from designer from all the folders except Smart Report.
4. Fixed an issue where 'Group by' was showing multiple set of groups of the same field on applying 'Sort by' on any field.
5. Fixed an issue where ID was not appearing as hyperlink on generating report in Turkish language with character "I".
Trace Analysis

1. New Features

1. Rights Management for Trace Analysis

Admins can now restrict access of ADO Project groups in Trace Analysis on different levels. Groups can be Allowed or Denied on different features of Trace Analysis. These features include Create/Edit Folder, Delete Folder, Create/Update Artifact, Delete Artifact, Export to Excel, Smart Report Generation, Smart Report Designer, Upload Template and Delete Uploaded Template.

2. Tool Enhancements

1. Implemented Requirement work item in Test Case API

MRDevOps now also provides support for Requirement/Product backlog/User story work items in test case coverage. Users can create the following hierarchy by using Requirement work item under Test suite to get the desired output.

➢ Test plan vs Test suite vs Requirement/PBI/User story vs Test case vs Test run vs Test result vs Test step run vs Bug

2. Support to apply sorting on the column of the Traceability grid

Users can now apply sorting on any column on the Traceability grid in the Horizontal matrix. The columns can be sorted in ascending/descending order. Sorting shall be an auto save process and will be retained while switching the files/ folders /module. The same result as on the grid will be displayed in ‘Export to Excel’ and Smart Report.

3. Support of Build number property against Test Case API virtual work items

Users can now view “Build number” property on Smart Report under Test point, Test Run and Test results virtual work items when added through designer tab.

3. Bug fixes

1. Fixed an issue related to the performance in HM trace, didn’t get revisions and discussion collection while having large number of work items.
2. Fixed an issue that by default, dropdown appears empty when ‘Export to Excel / Save as Word’ in Smart Report was selected while exporting the file.
3. Fixed an issue that ‘Open Traceability File’ hyperlink was not navigating to respective file which generating the traceability matrix with the greater number of work items than the set threshold.
Reporting

1. Tool Enhancements

1. Support to reuse same template with Area/Iteration value in another project

Users can now reuse reporting template created using “By value” option with query containing area/iteration values in another project.
1. **Bug fixes**

1. Fixed an issue where in ‘Analysis’ tab, the scenarios connectors were showing red highlighted on the canvas, and when scenario is selected from right panel, the connector color was changing to green.
2. Fixed an issue where when ‘Link Overlay’ is applied and then the option is selected again to remove Link Overlay’ green, then the respective color was not removed from the shape on the canvas.
3. Fixed an issue where on applying drill down on Shapes and Publishing scenarios, Use Cases & Test Cases, then on copy/pasting a diagram file from one folder to another, the Use Case, Scenario tabs were not opening, and the paths were not showing. On file check-out continuous loading was also showing.
4. Fixed an issue where on dragging and dropping BPMN stencil task shape and applying any property from context menu of the shape, the context menu was still showing on the canvas in spite of shifting the selection elsewhere.
5. Fixed an issue where on dragging some shapes on to the canvas and switching to analysis tab and bringing focus to canvas and clicking Ctrl+Z, ‘undo’ was working on analysis tab and highlighting color of scenario was changing and shapes were also removing.
6. Fixed an issue where on dragging category shape from cause-and-effect stencil on the canvas and re-sizing it, the shape was not resizing properly.
7. Fixed an issue where on applying hyperlink on shapes, the links were appearing on incorrect positions and navigation was not working.
8. Fixed an issue where on adding alternate fragment shape and inserting new conditions, the shape size was increasing from the top instead of the bottom, and when a condition was deleted, the shape size was not decreased.
9. Fixed an issue where on adding any shape on the canvas and pressing the alphabet or any other key, the shape size was decreasing.
10. Fixed an issue where on adding an annotation shape within a swimlane, the respective shape was showing despite setting annotation to ‘Off’ from tool bar.
11. Fixed an issue where on performing copy & paste through ctrl+c and ctrl+v, many shapes were being pasted in one go.
12. Fixed an issue where on applying page background color through properties pop-up, the same color was not resetting back to old selection on performing ‘Undo’.
13. Fixed an issue where on dragging shapes within swimlane or pool lane and adding links on those respective shapes to new or existing work items, the links were not showing in links tab. Also, on applying link overlay the shapes which had links to mockup, use case or diagram work items, the respective shapes were not showing as highlighted within swimlane.
14. Fixed an issue where the connector on ‘Actor’ shape was not connecting from the correct point and was starting from the center of the shape and when the shape was re-positioned, the connections were getting lost.
15. Fixed an issue where on copying a diagram file having shapes in it, the shapes were not selectable in the copied file.
16. Fixed an issue where new linked work items with a shape were not showing in the same copied diagram file.
17. Fixed an issue where image was not being retained in the media library after adding any image and selecting ‘Apply.’
1. **Bug fixes**

1. Fixed an issue where the target copy Baseline was not showing in the source Baseline when copied from team to team.
2. Fixed an issue where the TFS exception message was showing on ‘Compare’ popup when the text was added in steps of the ‘Test Case Work Item’.
3. Fixed an issue where the message was not showing properly on the rollback on ‘Read-Only fields’ of the work item(s).
4. Fixed an issue where line breaks were not showing in test case steps property on Compare pop up.
5. Fixed an issue where work items properties were showing null on the baseline grid on applying sorting/filtering or scroll down [Bulk Work items].
Simulation

1. Bug fixes

1. Fixed an issue where ‘Undo’ was not working on bold and italic properties on applying formatting like **Bold** and *Italic* on controls like text box, label, and button.
2. Fixed an issue where multiple controls were missing from samples section in right panel.
3. Fixed an issue where the columns were still un-selectable within the table when user tried to select a column within the table after clicking ‘Edit’ and then again clicking on ‘Discard Changes’ or ‘Save’ or ‘Check in Changes’ and clicking ‘Edit’ again.
4. Fixed an issue where user was unable to drag controls on the canvas saved through ‘Save As Control’.
Use Case

1. Bug fixes

1. Fixed an issue where in an already added SmartTag of multiple work items in table style, the whole table was removed when a new row was inserted within the same respective table and another smart tag in list style was added.

2. Fixed an issue where the entire step text is removed when applying ‘Smart Tag’ and selecting multiple work items (through query, id and title search) and then selecting ‘List’ style.

3. Fixed an issue where on creating a new folder, selection was showing on the file instead of the respective folder.
1. **Bug fixes**

   1. Fixed an issue where on closing the pop-up through 'X', continuous loading was showing. (Now the window will re-appear after 1 second if closed through 'X').
MR Services

1. Custom ID

1. Tool Enhancements

   1. Support for Area Path in Custom ID Scope

      Users can define ‘Custom ID’ scope as ‘Area Path’ now, so for every Area Path, separate counter for work items would be set.

   2. Custom ID option "Refresh from Server" is updated

      Scan functionality at the backend has now been added when user clicks the "Refresh from Server" option.

2. Bug fixes

   1. Work item type(s) were not displaying in CID and other MR Services too due to limitation of the API for XML base process templates; fixed with an alternate approach provided flag based.

2. Email Monitor

1. Bug fixes

   1. At some environments, Email Registration window was not closing on “Close” button. It has been fixed now.
3. Suspect Link

1. Tool Enhancements

   1. **Support for Project level configuration.**
      
      Suspect link now supports project level configuration.

   2. **Suspect Link option “Refresh from Server” is updated**
      
      Now scan functionality at the backend is added when user clicks the “Refresh from Server” option.

   3. **Tool tips of some fields are updated**
      
      Some tool tips are updated and enhanced.

   4. **Add new target work item link gets freeze after adding the work item**
      
      Add new target work item link was left open on UI, though it does not work, now freeze.

4. MatCal UI

1. Tool Enhancements

   1. **A new UI has been released for MatCal service.**
      
      Users can now configure MatCal from UI, provided under “Services” hub in Admin area.
Impact Assessment

1. Introduction

The Impact Assessment module for MR4DO allows users to perform impact analysis on a given work item which ultimately helps to analyze the impact on the related and subsequent work items down the hierarchy. The tool helps the user in identifying the "to-be-affected" related work items prior to making any changes to the source work item/root level. The extension provides an easy-to-use user interface that allows marking work items according to the Impact and creating new task(s) to account for the impact/changes.
Appendix A: Hardware Requirements for Redis

According to Modern Requirements4DevOps, approximate memory usage per user is 477.8495 KB (0.4666 MB). Maximum hard drive space required is 1.5 \times \text{memory size}. For instance, in case of an 8 GB RAM, the maximum hard drive space occupied by Redis would be 12 GB.