

IBM Engineering Lifecycle Management

What's new in ELM 7.1

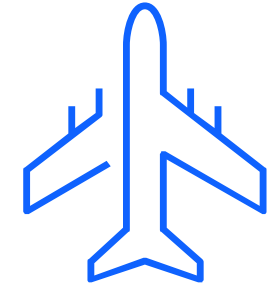
Fariz Saracevic
Senior Product Manager

November 2024

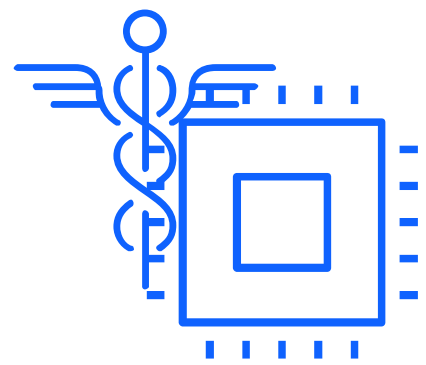
IBM Engineering enables customers with complex engineering needs



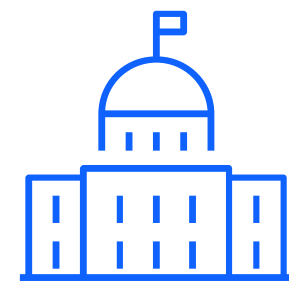
Automotive



Aerospace & Defense



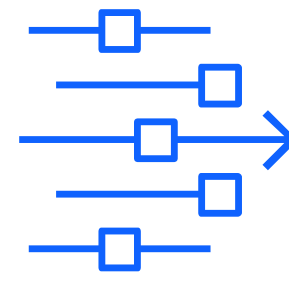
Electronics & Medical Devices



Public & Government



Regulated Finance & Insurance



Infrastructure

Our strategic focus addresses

Complexity

deliverable interacts with multiple other systems

Compliance

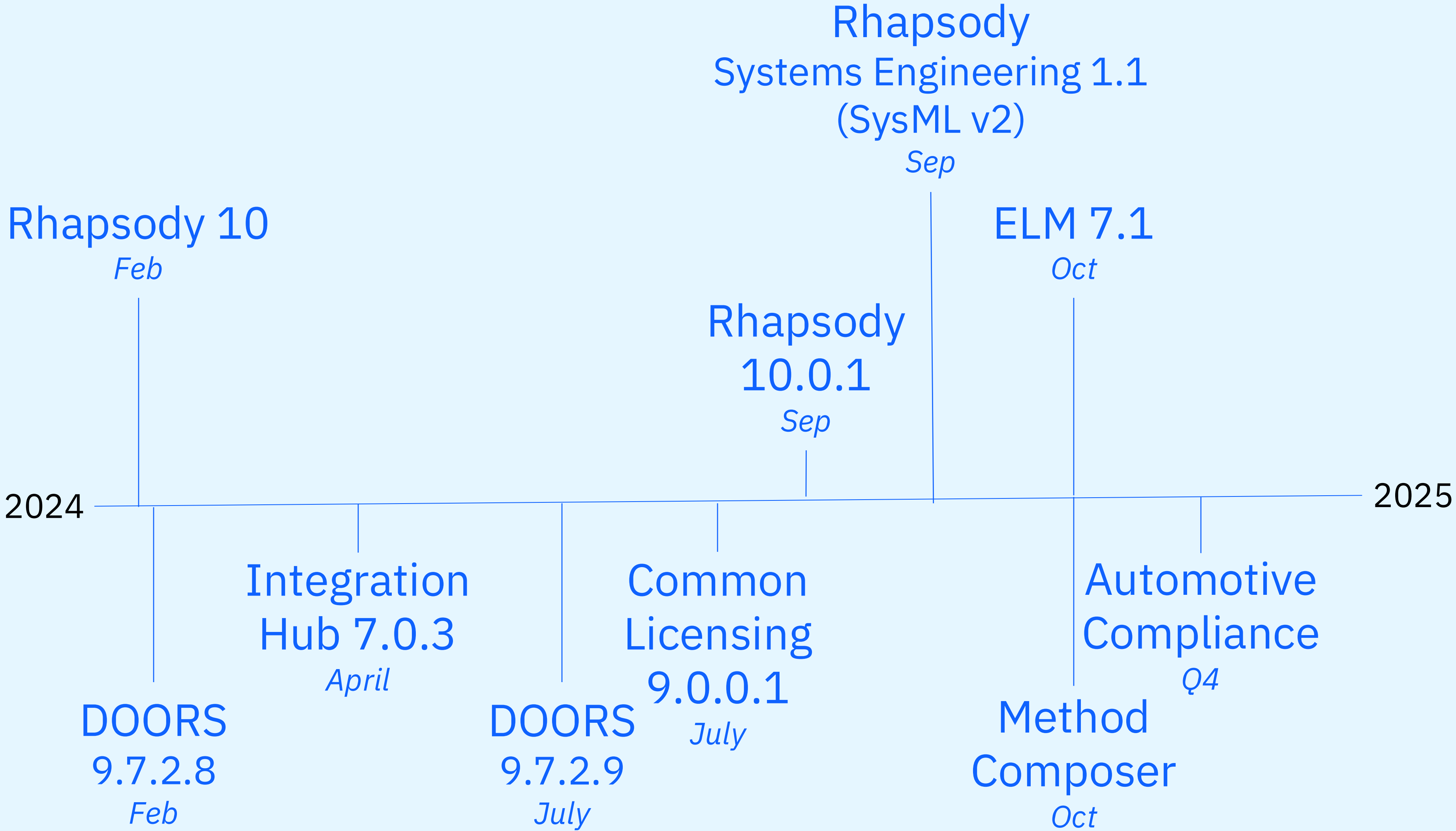
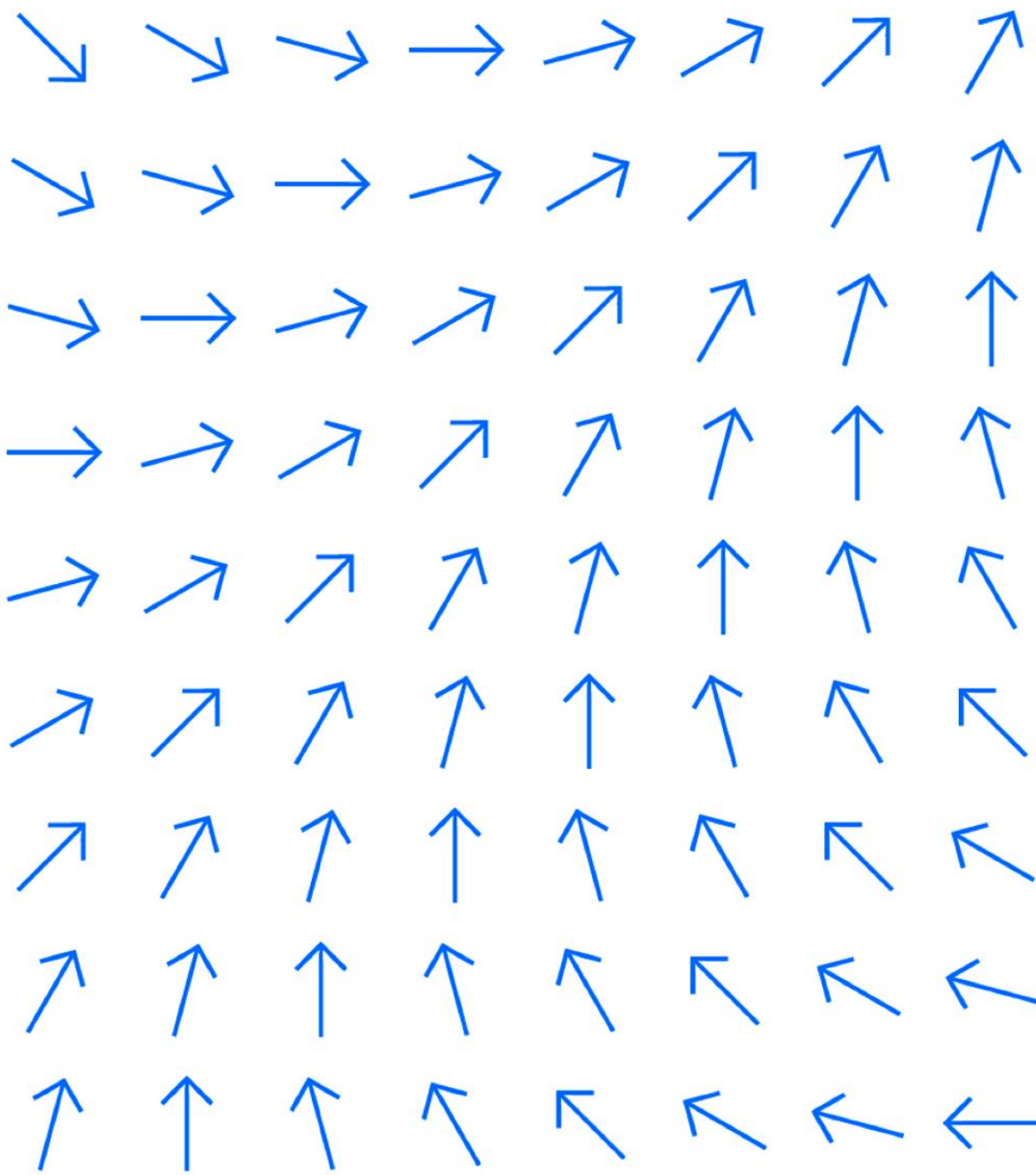
safety- and mission-critical systems, including those subjected to regulatory standards

Distributed Work

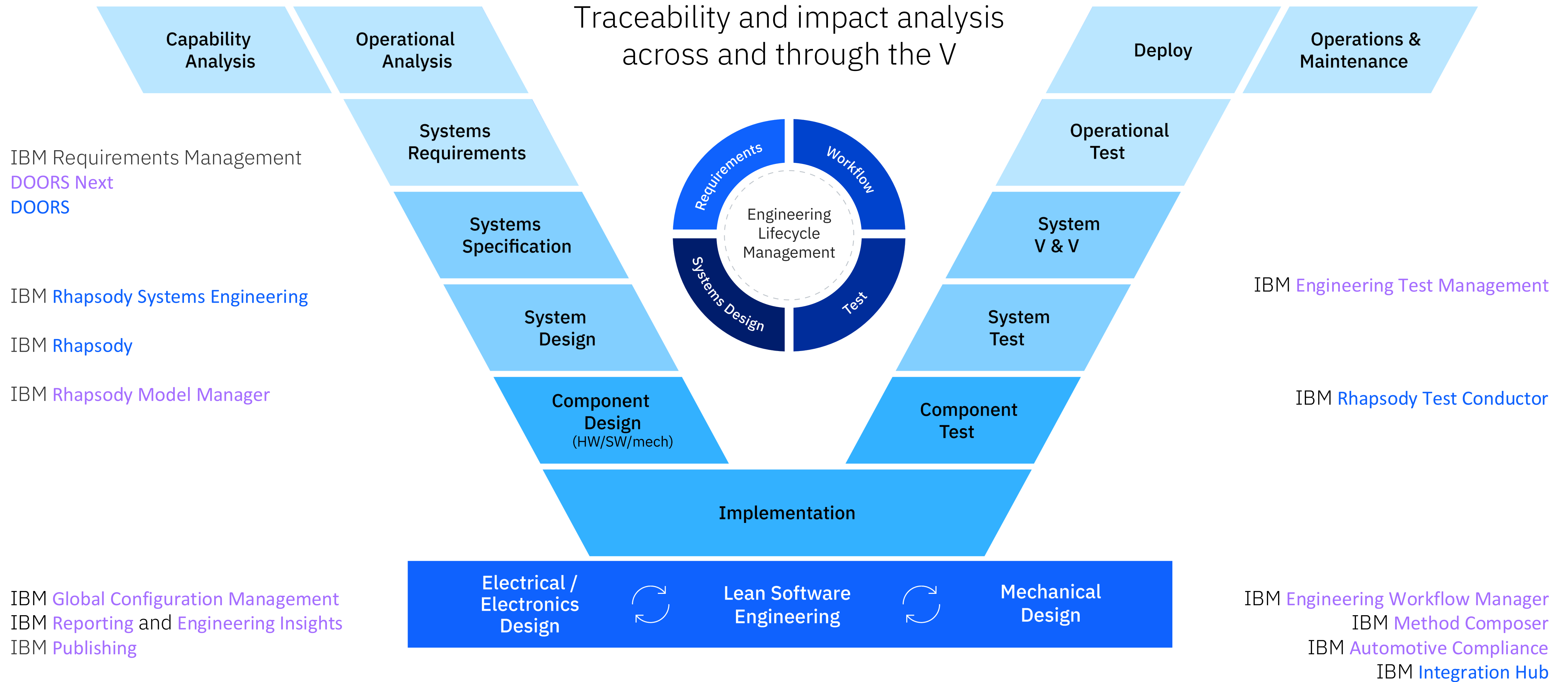
large, multi-faceted development organizations or partner/supplier chains

ELM is the foundation for complex software and systems development

IBM ELM deliveries in 2024

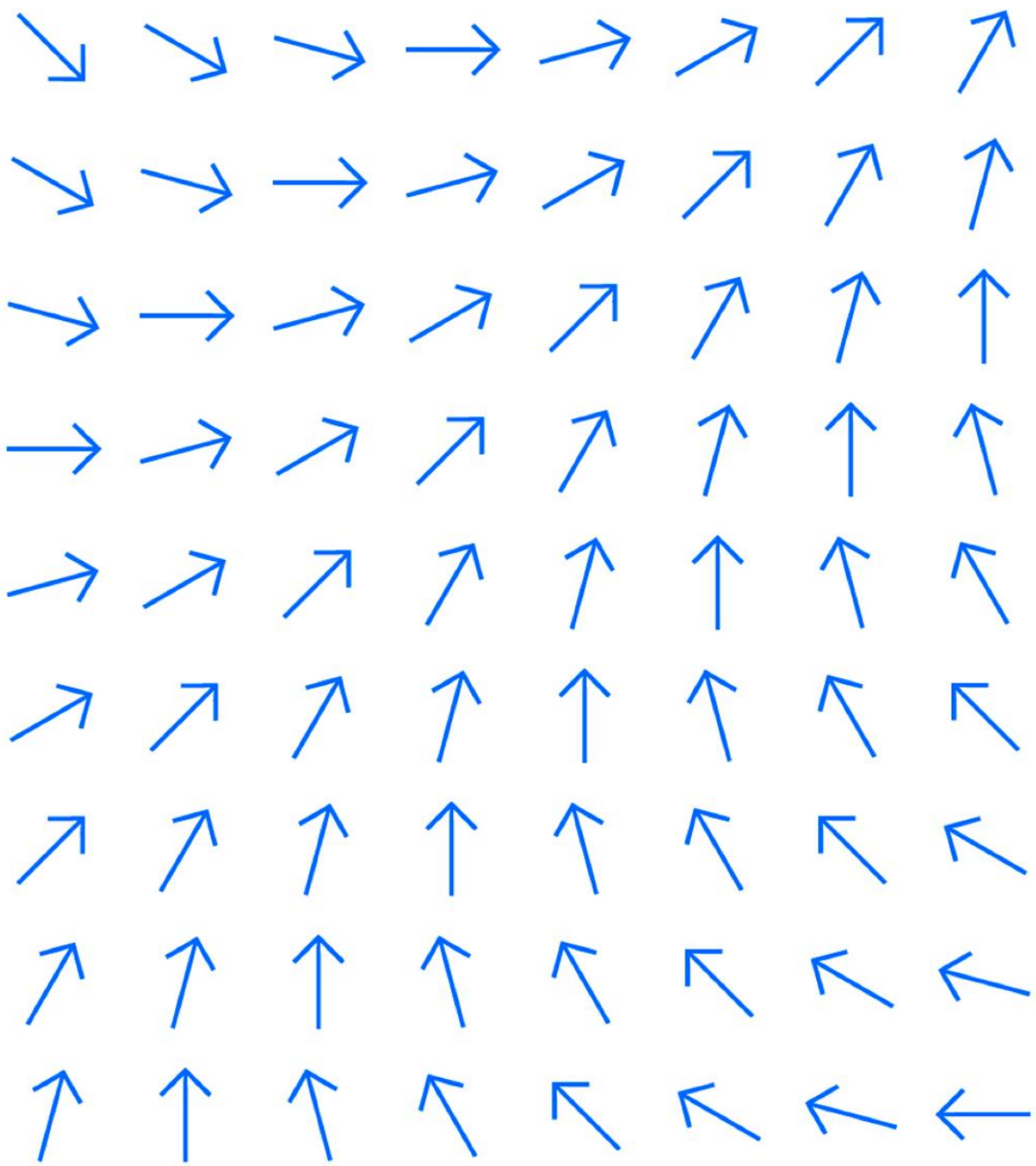


2024Q4 updates: ELM 7.1 and related



ELM 7.1

builds on IBM
leadership in...



1

Digital Thread

Defines and helps teams manage dependencies among engineering data from their tools

Link between models with OSLC-AM (RMM), including with the new Rhapsody Systems Engineering (employing SysML v2)

Simplified linking: drag-n-drop across RMM browser windows

Larger/more convenient drop zone for work item drag-n-drop linking and adding attachments

Engineering Insights knowledge / traceability graph using LQE rs

2

Reporting

Automates the gathering and presentation of project and program-wide status information and program deliverables

Report on additional dimensions in historical metrics when using LQE

Built-in Report Builder type explorer documents data source schemas, simplifying advanced report authoring

Reporting performance, scale reliability, availability:

- New relational database store for LQE is the default
- DOORS Next log-based TRS required
- Removed many cases for needing to reindex

3

Configuration and Change Management

Improves the process of defining, reviewing, and changing artifacts in the context of the larger product under design or development

Create DOORS Next baseline at a time in the past

Export requirements in a baseline using an existing ReqIF definition

Enforce unique config names in ETM

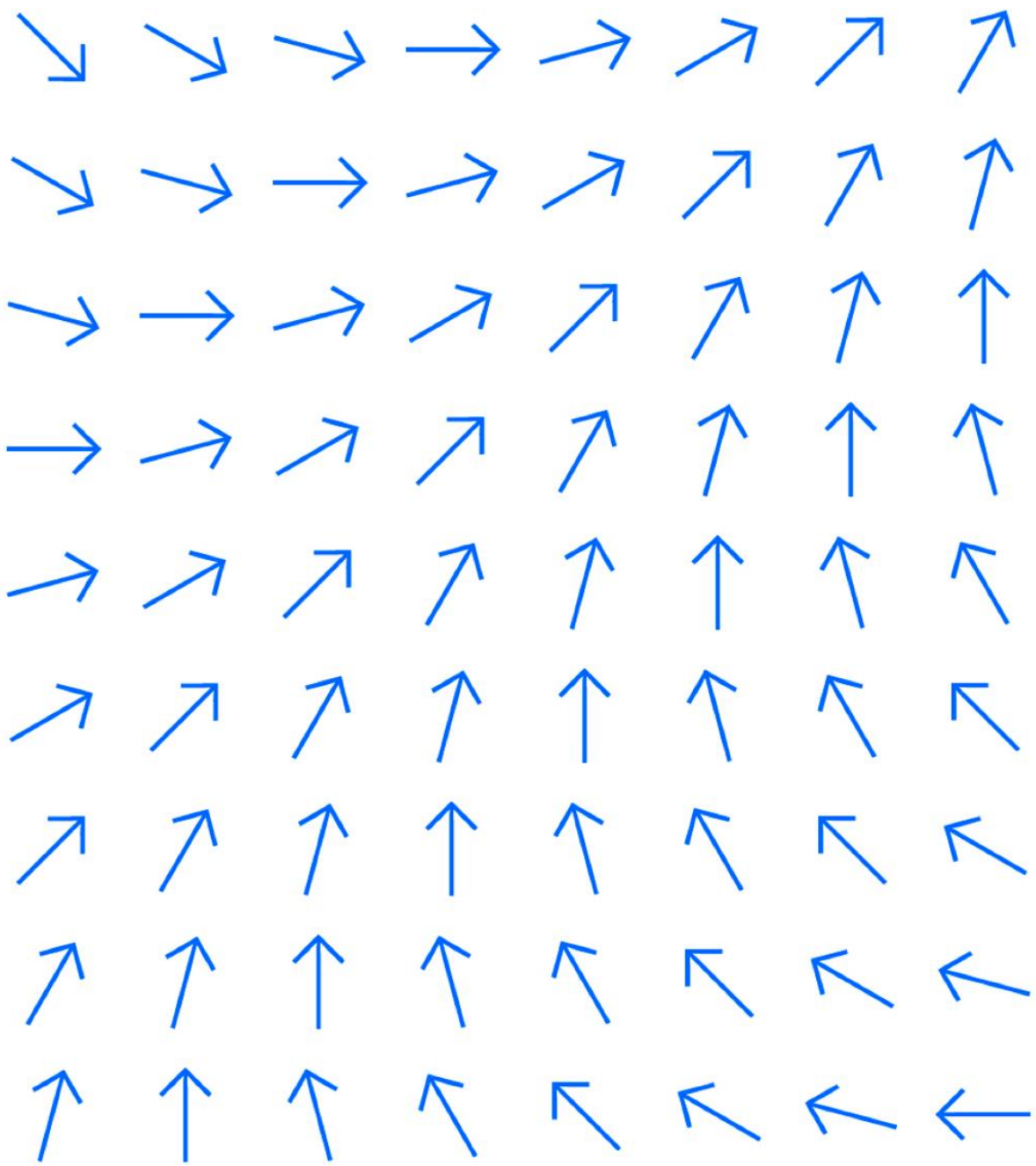
Use a more flexible and consistent grammar for more predictable EWM-Git workflow

Code review improvements

LXD rs: link index moved to relational store and combined with LQE rs (one less server!)

ELM 7.1

builds on IBM
leadership in...



4

Agile Engineering

Facilitates planning and managing work to reduce time to market, minimize bottlenecks, and accelerate the flow of work across the value stream for continuous value delivery

Express yourself: images and tables in work items descriptions

Enhance agility using latest guidance for SAFe®

- Updated flow metrics reports and templates

Extend Automotive Compliance

- ASPICE 4.0 updates
- ASPICE for Cybersecurity
- Improved TARA and guidance on vulnerability management

5

User Productivity

Practitioners and administrators can work faster with less overhead and fewer opportunities for error

Get the requirements data you need in front of you:

- Ancestors and descendants
- Advanced filtering

Easier navigation through Rhapsody models in web browser with RMM sidebar model explorer

6

Operating at Scale

With hardened deployments, increased data and user scale, and keeping current with the specific operation environment and integrations

Easier auditing of user access and permissions

- APIs and logging

Performance optimizations

- Significant improvements in report queries with LQE rs
- Significant improvements in versioned link lookups for UIs with LDX rs
- Other improvements

Secure deployments

- updates to components, specified operating environment, and integrations

DOORS Next

Engineering Requirements Management DOORS Next 7.1

User Productivity

Easier to get the information you need in front of you

- Show ancestors and descendants in modules
- Advanced filtering with disjoint (“OR”) conditions with new query builder UI
- Configure the artifact sidebar width in the Artifact editor

Configuration management

- Create baselines in the past (“historical” a.k.a. “retroactive” baseline), removing the need to create “just in case” baselines
- Export requirements in a baseline using an existing ReqIF definition

Quality, availability, and serviceability

Reporting

- TRS more resilient to unplanned server outage and heavy server load
- Reduced time to resolution in cases of TRS “skipped resource” or other reason to reindex

Configuration management

- Change set delivery logging improvements

Integration, automation, auditing

- New and extended REST APIs
- New user access log



Complex Expressions with AND/OR Boolean Operators

IBM Engineering Requirements Management DOORS Next (/rm)

Z-CM-001-RM | AMR

Change set NOT required | Pam Turner

Project Dashboard | Artifacts | Reviews | Reports

Search Artifacts

... / 01 Requirements / | 1523439 AMR System Requirements Specification

Create | Apply

All match (AND) Edit in new window Close filters

No filters. Add filters to only list matching artifacts

+ Add filter | Add group

	ID	Contents
<input type="checkbox"/>	1523516	-1 Introduction
<input type="checkbox"/>	1523681	-1.1 Purpose of the Document
<input type="checkbox"/>	1523702	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.
<input type="checkbox"/>	1523466	-2 General Description
<input type="checkbox"/>	1523587	-2.1 Functions and Purpose
<input type="checkbox"/>	1523630	The AMR system is used to determine water service / consumption for the more than 79,000 meter connections to residential, commercial and industrial customers inside a 72 square mile area.
<input type="checkbox"/>	1523699	In handheld AMR, a meter reader carries a handheld computer with a built-in or attached receiver/transceiver (radio frequency or touch) to collect meter readings from an AMR capable meter. This is sometimes referred to as "walk-by" meter reading since the meter reader walks by the locations where meters are installed as they go through their meter reading route. Handheld computers may also be used to manually enter readings without the use of AMR technology as an alternate but this will not support comprehensive data which can be accurately read using the meter reading electronically.
<input type="checkbox"/>	1523650	<AMR Artist Rendition>

Showing 72 of 72 (100%)

IBM. *Jazz*

Complex Expressions with AND/OR Boolean Operators

The screenshot shows the IBM Engineering Requirements Management DOORS Next interface. The top navigation bar includes the project name 'Z-CM-001-RM', the artifact name 'AMR', and user information 'Pam Turner'. The breadcrumb trail indicates the current location: '... / 01 Requirements / 1523439 AMR System Requirements Specification'. A filter bar is visible with a dropdown menu open, showing options for 'All match (AND)', 'Some match (OR)', 'Not all match (AND NOT)', and 'None match (OR NOT)'. The main content area displays a table of requirements with columns for 'Show', 'ID', and 'Contents'. The table lists several requirements, including '1 Introduction', '1.1 Purpose of the Document', '2 General Description', and '2.1 Functions and Purpose'. The bottom of the interface shows the IBM logo and the Jazz logo.

IBM Engineering Requirements Management DOORS Next (/rm)

Z-CM-001-RM | AMR

Change set NOT required | Pam Turner

Project Dashboard Artifacts Reviews Reports

Search Artifacts

... / 01 Requirements / 1523439 AMR System Requirements Specification

Create Apply

All match (AND) Edit in new window Close filters

All match (AND) Some match (OR) Not all match (AND NOT) None match (OR NOT) Add group

Views

Search Views

Gold Plating

Trace to Stakeholder Requirements

Upstream and Downstream Traceability (Satisfaction)

All Status

Approved Requirements

Show Ancestors Descendants Highlight filter matches

Show	ID	Contents
<input type="checkbox"/>	1523516	1 Introduction
<input type="checkbox"/>	1523681	1.1 Purpose of the Document
<input type="checkbox"/>	1523702	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.
<input type="checkbox"/>	1523466	2 General Description
<input type="checkbox"/>	1523587	2.1 Functions and Purpose
<input type="checkbox"/>	1523630	The AMR system is used to determine water service / consumption for the more than 79,000 meter connections to residential, commercial and industrial customers inside a 72 square mile area.

Showing 72 of 72 (100%)

IBM. Jazz

Complex Expressions with AND/OR Boolean Operators

IBM Engineering Requirements Management DOORS Next (/rm)

Z-CM-001-RM | AMR

Project Dashboard Artifacts Reviews Reports

Change set NOT required Pam Turner

Search Artifacts

... / 01 Requirements / 1523439 AMR System Requirements Specification

Create Apply

All match (AND)

Some match (OR)

- Name contains unit
- Name contains device

+ Add filter + Add group

+ Add filter + Add group

Views

Search Views

Gold Plating

Trace to Stakeholder Requirements

Upstream and Downstream Traceability (Satisfaction)

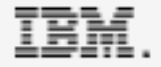
All Status

Approved Requirements

Show Ancestors Descendants Highlight filter matches

	ID	Contents
<input type="checkbox"/>	1523653	The handheld device shall provide a means to automatically (electronically) read the meter.
<input type="checkbox"/>	1523664	Individual meter usage data and leak diagnostic data, when successfully uploaded to the handheld device, shall be immediately available for display on the handheld device.
<input type="checkbox"/>	1523544	The handheld device shall display the following data for leakage: timestamp, meter ID
<input type="checkbox"/>	1523535	3.1.2 Meter Interface Unit
<input type="checkbox"/>	1523632	The meter interface unit shall operate using walk-by, mobile (vehicle-based), and mesh network collection platforms.
<input type="checkbox"/>	1523703	The meter interface unit shall support all data collection functions (data reading, time-triggered operation, and management) of the AMR system.

Showing 34 of 34 (100%)



Complex Expressions with AND/OR Boolean Operators

The screenshot displays the IBM Engineering Requirements Management DOORS Next interface. At the top, the breadcrumb navigation shows the path: ... / 01 Requirements / 1523439 AMR System Requirements Specification. The main area features a filter expression editor with a tree structure. A red box highlights the filter expression: "All match (AND)" containing three conditions: "Name contains handheld", "None match (OR NOT)" containing "Name contains unit" and "Name contains device". To the right of the filter editor, there are buttons for "Edit in new window" and "Close filters". Below the filter editor, a "Views" sidebar on the left lists various views like "Gold Plating" and "Trace to Stakeholder Requirements". The main content area shows a table of requirements with columns for "Show", "ID", and "Contents". Two requirements are visible: ID 1523699 and ID 1523762. The bottom of the interface includes the IBM logo and a "Jazz" logo.

IBM Engineering Requirements Management DOORS Next (/rm)

Z-CM-001-RM | AMR

Change set NOT required | Pam Turner

Project Dashboard | Artifacts | Reviews | Reports

Search Artifacts

... / 01 Requirements / 1523439 AMR System Requirements Specification

Create | Apply

All match (AND)

- Name contains handheld
- None match (OR NOT)
 - Name contains unit
 - Name contains device

+ Add filter | + Add group

Edit in new window | Close filters

Views

Search Views

Gold Plating

Trace to Stakeholder Requirements

Upstream and Downstream Traceability (Satisfaction)

All Status

Show Ancestors Descendants Highlight filter matches

Show	ID	Contents
<input type="checkbox"/>	1523699	In handheld AMR, a meter reader carries a handheld computer with a built-in or attached receiver/transceiver (radio frequency or touch) to collect meter readings from an AMR capable meter. This is sometimes referred to as "walk-by" meter reading since the meter reader walks by the locations where meters are installed as they go through their meter reading route. Handheld computers may also be used to manually enter readings without the use of AMR technology as an alternate but this will not support comprehensive data which can be accurately read using the meter reading electronically.
<input type="checkbox"/>	1523762	Meter usage data and leak diagnostic data shall be retrievable on demand from any meter interface via the network or a handheld.

Showing 2 of 38 (5%)

IBM. Jazz

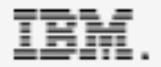
Complex Expressions with AND/OR Boolean Operators

The screenshot displays the IBM Engineering Requirements Management DOORS Next interface. The main window shows a list of requirements with columns for 'Show', 'ID', and 'Contents'. Two requirements are visible: ID 1523699 and ID 1523762. A red box highlights a notification: "Filters are open in a separate window".

An overlay window titled "Filter - AMR System Requirements Specification" is open, showing a filter configuration. The filter is set to "All match (AND)" and contains the following rules:

- Name contains handheld
- None match (OR NOT) group containing:
 - Name contains unit
 - Name contains device

Buttons for "Add filter" and "Add group" are visible at the bottom of the filter configuration.



Show Ancestors/Descendants

The screenshot shows the IBM Engineering Requirements Management DOORS Next interface. The top navigation bar includes the project name 'Z-CM-001-RM', the artifact type 'AMR', and the user 'Pam Turner'. The breadcrumb path is 'Project Dashboard / Artifacts / Reviews / Reports / ... / 01 Requirements / 1523439 AMR System Requirements Specification'. The main content area displays a list of requirements with columns for ID, Contents, and Status. A red box highlights the 'Show' section, which contains two checkboxes: 'Ancestors' and 'Descendants'. The 'Approved Requirements' view is selected in the left sidebar. The bottom of the interface shows the IBM logo and the Jazz logo.

ID	Contents	Status
1523531	The handheld device shall provide for the means for the meter reader to manually enter a meter reading.	Approved
1523775	The handheld device shall include a leak indicator.	Approved
1523653	The handheld device shall provide a means to automatically (electronically) read the meter.	Approved
1523502	The meter interface unit shall employ two-way communications down to the endpoint making it possible for operators to 'push' interval data requests, firmware updates, new capabilities and updated monitoring schedules via the network.	Approved
1523719	The meter interface unit shall be powered by a replaceable long lasting battery (lithium or other).	Approved
1523625	The systems shall forward a reading from a more remote area back to a main collector without actually storing it.	Approved
1523772	The system shall consist of a series of antennas, towers, collectors, repeaters, or other permanently installed infrastructure to collect transmissions of meter readings from AMR capable meters and get the data to a central computer without a person in the field to collect it.	Approved
1523761	The control computer shall be capable of operating in a normal office environment.	Approved
1523781	The handheld unit shall function in environments from -5 degree C through +50 degree C.	Approved
1523611	The handheld unit shall function in environments with 99% ambient humidity.	Approved
1523499	The meter interface unit shall be able to store data into nonvolatile RAM which does not need power supply to maintain memory.	Approved

Show Ancestors/Descendants

The screenshot shows the IBM Engineering Requirements Management DOORS Next interface. The top navigation bar includes the project name 'Z-CM-001-RM', the artifact type 'AMR', and user information 'Pam Turner'. The main content area displays a list of requirements for '1523439 AMR System Requirements Specification'. A red box highlights the 'Show' section, where the 'Ancestors' checkbox is checked and the 'Descendants' checkbox is unchecked. The table below shows a hierarchy of requirements, including '3 System Requirements', '3.1 Functional Requirements', '3.1.1 Handheld device', '3.1.2 Meter Interface Unit', and '3.1.3 Fixed Network Automated Meter Reading System'. The status of each requirement is listed as 'Approved'.

ID	Contents	Status
1523574	-3 System Requirements	
1523552	-3.1 Functional Requirements	
1523482	-3.1.1 Handheld device	
1523531	The handheld device shall provide for the means for the meter reader to manually enter a meter reading.	Approved
1523775	The handheld device shall include a leak indicator.	Approved
1523653	The handheld device shall provide a means to automatically (electronically) read the meter.	Approved
1523535	-3.1.2 Meter Interface Unit	
1523502	The meter interface unit shall employ two-way communications down to the endpoint making it possible for operators to 'push' interval data requests, firmware updates, new capabilities and updated monitoring schedules via the network.	Approved
1523719	The meter interface unit shall be powered by a replaceable long lasting battery (lithium or other).	Approved
1523663	-3.1.3 Fixed Network Automated Meter Reading System	
1523625	The systems shall forward a reading from a more remote area back to a main collector without actually storing it.	Approved
1523772	The system shall consist of a series of antennas, towers, collectors, repeaters, or other permanently installed infrastructure to collect transmissions of meter readings from AMR capable meters and get the data to a central computer without a person in the field to collect it.	Approved
1523517	-3.2 Non-Functional Requirements	

Show Ancestors/Descendants

The screenshot shows the IBM Engineering Requirements Management DOORS Next interface. The top navigation bar includes the project name 'Z-CM-001-RM', the artifact type 'AMR', and the user 'Pam Turner'. The main content area displays a list of requirements under the heading '1523439 AMR System Requirements Specification'. A red box highlights the 'Show' options, which include 'Ancestors' and 'Descendants', both of which are checked. The requirements list includes the following items:

ID	Contents	Status
1523574	-3 System Requirements	
1523552	-3.1 Functional Requirements	
1523482	-3.1.1 Handheld device	
1523531	The handheld device shall provide for the means for the meter reader to manually enter a meter reading.	Approved
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1523653	The handheld device shall provide a means to automatically (electronically) read the meter.	Approved
1523535	-3.1.2 Meter Interface Unit	
1523502	The meter interface unit shall employ two-way communications down to the endpoint making it possible for operators to 'push' interval data requests, firmware updates, new capabilities and updated monitoring schedules via the network.	Approved
1523782	The meter interface unit shall be compatible with the existing meter models in use for the area covered by this project.	In Process
1523719	The meter interface unit shall be powered by a replaceable long lasting battery (lithium or other).	Approved
1523558	The meter interface unit shall capture usage data hourly and store this consumption data for up to 365 days. This hourly consumption data is considered usage profile data.	In Process
1523762	Meter usage data and leak diagnostic data shall be retrievable on demand from any meter interface via the network or a handheld.	Obsolete
1523663	-3.1.3 Fixed Network Automated Meter Reading System	

The interface also shows a 'Views' sidebar on the left with options like 'Gold Plating', 'Trace to Stakeholder Requirements', and 'Upstream and Downstream Traceability (Satisfaction)'. The bottom of the screen displays the URL 'https://svtperfihs.dev.fyre.ibm.com:9443/rm/web#action=com.ibm.rdm.web.pages.showReport...' and the Jazz logo.

Show Ancestors/Descendants

IBM Engineering Requirements Management DOORS Next (/rm)

Z-CM-001-RM | AMR

Change set NOT required | Pam Turner

Project Dashboard | Artifacts | Reviews | Reports

Search Artifacts

... / 01 Requirements / | 1523439 AMR System Requirements Specification

Create

View: Approved Requirements

Type to filter artifacts by text or by ID

Views

Search Views

Gold Plating

Trace to Stakeholder Requirements

Upstream and Downstream Traceability (Satisfaction)

All Status

Approved Requirements

Show Ancestors Descendants Highlight filter matches

ID	Contents	Status
1523574	3 System Requirements	
1523552	3.1 Functional Requirements	
1523482	3.1.1 Handheld device	
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1523782	The meter interface unit shall be compatible with the existing meter models in use for the area covered by this project.	In Process
1523719	The meter interface unit shall be powered by a replaceable long lasting battery (lithium or other).	Approved
1523558	The meter interface unit shall capture usage data hourly and store this consumption data for up to 365 days. This hourly consumption data is considered usage profile data.	In Process
1523762	Meter usage data and leak diagnostic data shall be retrievable on demand from any meter interface via the network or a handheld.	Obsolete
1523663	3.1.3 Fixed Network Automated Meter Reading System	

Showing 24 of 72 (33%)

https://svtperfihs.dev.fyre.ibm.com:9443/rm/web#action=com.ibm.rdm.web.pages.showProjectDashboard&componentURI=https%3A%2F%2Fsvtperfihs.d...

Jazz

Show Ancestors/Descendants

IBM Engineering Requirements Management DOORS Next (/rm)

Z-CM-001-RM | AMR

Change set NOT required | Pam Turner

Project Dashboard | Artifacts | Reviews | Reports

Search Artifacts

... / 01 Requirements / | 1523439 AMR System Requirements Specification

Create | View: Approved Requirements | Type to filter artifacts by text or by ID

Views

- Gold Plating
- Trace to Stakeholder Requirements
- Upstream and Downstream Traceability (Satisfaction)
- All Status
- Approved Requirements**

Show Ancestors Descendants Highlight filter matches

ID	Contents	Status
1523574	-3 System Requirements	
1523552	-3.1 Functional Requirements	
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1523531	The handheld device shall provide for the means for the meter reader to manually enter a meter reading.	Approved
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Showing 24 of 72 (33%)

https://svtperfihs.dev.fyre.ibm.com:9443/rm/web#action=com.ibm.rdm.web.pages.showProjectDashboard&componentURI=https%3A%2F%2Fsvtperfihs.d...

Jazz

Improved DOORS Next TRS

The DOORS Next Tracked Resource Set (TRS) service is now **more resilient** to unplanned server outages and heavy server load.

It provides data to (1) LQE for reporting (Report Builder, Engineering Insights) and (2) LDX for versioned link information when using global configurations.

The improved **log-based TRS** replaces the previous **event-based TRS**.

New installations: New DOORS Next v7.1 server deployments use the new, improved log-based TRS

Upgrading to 7.1: Switching to log-based TRS required* as part of the upgrade process. This includes a DOORS Next TRS rebase operation and LQE reindex of the DOORS Next TRS data

For additional details, see the interactive upgrade guide.

* If not already configured in 7.0.2 or 7.0.3.

Create a historical baseline

The screenshot shows the IBM Engineering Requirements Management DOORS Next interface. The main window displays a list of artifacts under the 'Modules' tab. A 'Create Baseline' dialog box is open in the foreground, allowing the user to create a baseline for the 'AMR Initial Stream' stream. The dialog includes a 'Name' field with the value 'Before Review Started' and a 'Description' field. The 'Create Time' section is highlighted with a red box, showing the 'Now' radio button is unselected, and the date '8/15/2024' and time '08:00:00' are selected. The 'Create' button is highlighted in blue.

ID	Name	Author	Created
1523449			
1523448			
1523447			
1523446			
1523445			
1523444			
1523443			
1523442	AMR Hazards and Risks	Pam Turner	Apr 19, 2024, 1:25:12 PM
1523441	Software Requirements Specification	Pam Turner	Apr 19, 2024, 1:25:12 PM

Configure the artifact sidebar width in the Artifact editor

The screenshot displays the IBM Engineering Requirements Management DOORS Next interface. At the top, the header shows the project name 'Z-CM-001-RM' and the artifact type 'AMR'. A navigation bar includes 'Project Dashboard', 'Artifacts', 'Reviews', and 'Reports'. The main content area shows an artifact titled '1523702' with a description: '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.' A sidebar on the right, outlined in red, provides an 'Overview' of the artifact, including its title, description, tags, module, component, team ownership, creation and modification dates, and creator/modifier. The sidebar also lists 'Type: Information', 'Format: Text', and sections for 'Comments (0)', 'Links (0)', and 'Where Used'. The IBM logo is visible in the bottom left corner.

Export and download ReqIF definitions from a baseline context

The screenshot shows the IBM Engineering Requirements Management DOORS Next interface. At the top, the breadcrumb navigation includes 'Z-CM-001-RM' and 'AMR'. A notification bar at the top left states 'Artifacts in a baseline cannot be changed. show details'. The main navigation bar includes 'ReqIF' as the active tab. Below this, the 'ReqIF' section header is followed by the instruction 'Create and manage ReqIF definitions, which are used to create and export ReqIF files.' The 'ReqIF Definitions' table lists 'AMR System Requirements Specification'. A context menu is open over this entry, with 'Export...' highlighted in a red box. The 'Export...' option is accompanied by a download icon. Other options in the menu include 'Create Copy...', 'Export with context...', and 'Delete...'. The right-hand side of the interface shows a form for editing the definition, with the 'Name' field containing 'AMR System Requirements Specification'. Below the form, the 'Content' section shows 'Views : 0 selected...' and 'DOORS9 settings : 0 attributes restricted...'. At the bottom, an 'Artifacts' table displays one artifact: '1523439 AMR System Requirements Specification' with an artifact type of 'System Specification'. The IBM logo is in the bottom left, and the Jazz logo is in the bottom right.

Enhancements to DOORS Next REST APIs

- Create a baseline of a stream at a time in the past (“retroactive baseline”)
- Allow HTTP clients to retrieve the content of the delivered and undelivered changesets
- Retrieve a list of baselines for a given stream by introducing a new public OSLC configuration query capability
- Provide information about an artifact such as when it was created, modified, or deleted by a specific user within a given period
- Added a filter to an existing REST API that retrieves history of an artifact within a given period.

For more information, see the following topics:

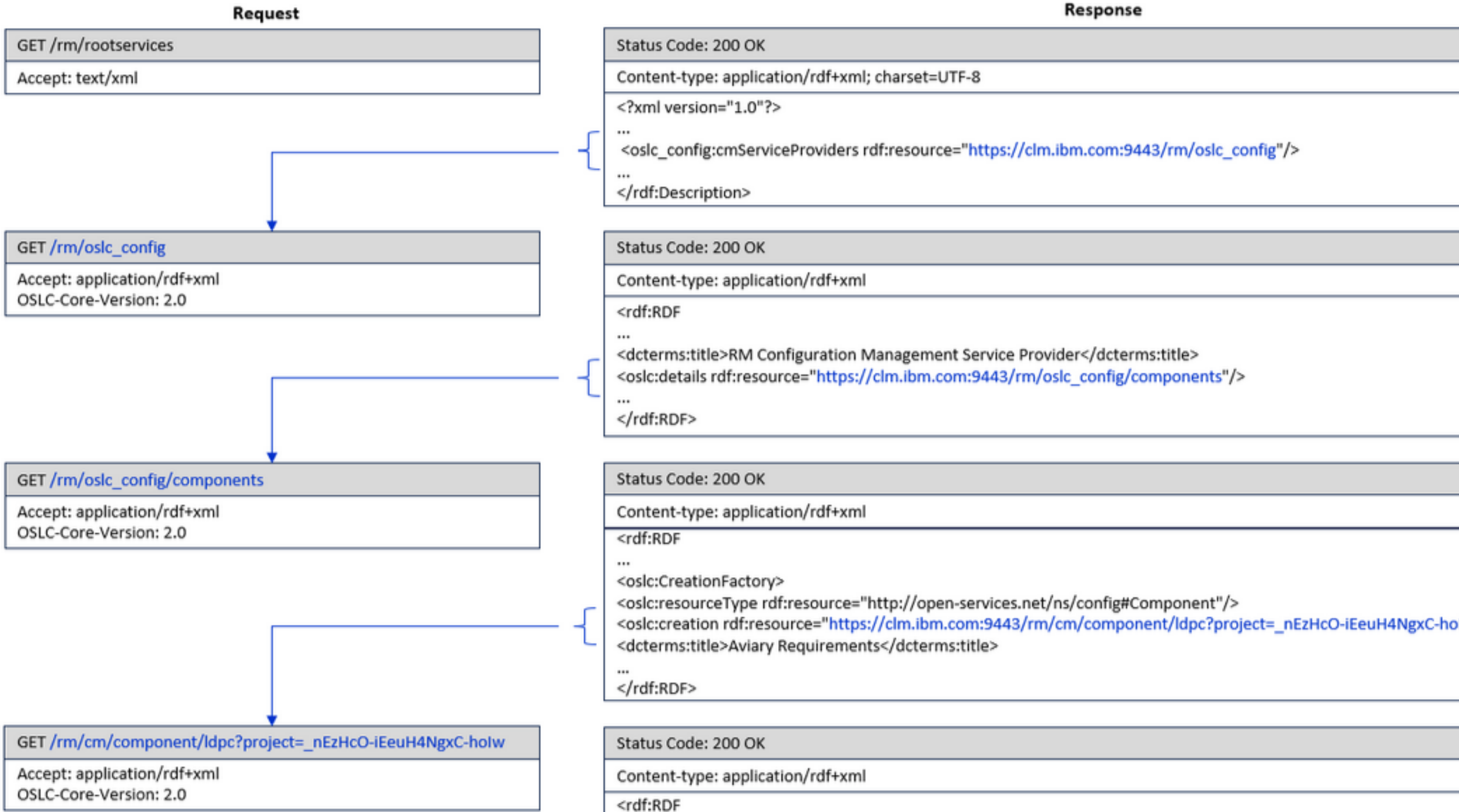
- [DOORS Next \(DN\) Changeset Contents API Overview](#)
- [DOORS Next \(DN\) OSLC Configuration Query Capability Overview: To retrieve a list of baselines for a given stream URI](#)
- [DOORS Next Generation data sources](#)

Sample Resources and API Usage

A new predicate link `dng_config:changes` is added to `oslc_config:ChangeSet` representation that allows Changeset changes to be discovered.

Discovery Chain (Undelivered Changeset)

The diagram below outlines the discovery chain for undelivered change sets. Notice how the blue highlighted URL in the response is used as the next GET request URL in the discovery chain.



Workflow Management

Engineering Workflow Management 7.1

User Productivity

- Express yourself using inline images and tables in work item descriptions and Large HTML attributes.
- Add a paragraph using the magic line capability from inaccessible places in the active editor like tables and indented text.
- Drag & drop easily in a bigger drop zone when linking work items or uploading attachments.

Developer Integrations

- Improved flexibility with grammar used for Engineering Workflow Management Git integration
- New version of Team Concert Git Jenkins plugin with security fixes
- Support for latest versions of Git, Jenkins

Agile Engineering

- Use SAFe 6.0 Full and Essential templates available in the product to establish a SAFe tooling environment.
- Set the backlog iteration for a child project area without overriding the rest of the configuration using separate tabs for different planning configuration elements in web client.

Updated System Requirements

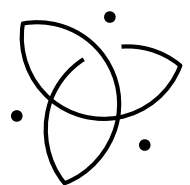
- Eclipse 4.23 (via IM & p2), Eclipse 4.27 (via p2 install only), Eclipse 4.31 (via p2 install only)
- No known public API changes

Jazz Source Control

- Reopen operation added to code review tool
- Improved logging around change sets appearing for code review
- Improved search
- CLI improvements
- Additional logging for serviceability
- Improved change event processing to ensure that each change event uses a different category id

Performance

- Improved load time of work items in environments with many custom attributes paired with many users and project areas.
- Improved loading of plans when there are large numbers of concurrent users performing operations



Add images inline to work item description and large html attributes

Image types

jpeg, gif, png, and bmp

Copy-paste image from the clipboard or file explorer

Or use existing image attachments from current or different work item

The screenshot displays the IBM Engineering Workflow Management (JKE Banking) interface. The main window shows a work item titled "Story 92" with a summary: "As a user, I want to manage multiple accounts using a single login so that I can save time." The work item description includes a diagram with a large downward arrow and a list of tasks and considerations. An "Insert image" dialog box is open in the foreground, allowing the user to select an attachment from the current work item or specify an attachment ID. The dialog box includes fields for "Attachment on this work item" (showing "5 : online-banking-mrtogage-high-level-stories-31..."), "Attachment ID", "Alternative text", and a "Preview" section. The "Preview" section shows two small image thumbnails: "I wish to request changes in mortgage types" and "I wish to request changes in interested rates and yields". The dialog box has "Cancel" and "OK" buttons at the bottom.

Add tables inline to work item description and large html attributes

- Use common html table features
- Copy-paste table from MS Word and MS Excel

Project Dashboards ▾ Work Items ▾ Plans ▾ Source Control ▾ Builds ▾ Reports ▾

Task 121: Conduct Attack Analysis for Item: Smart Car Sharing Lock*

Details

Description

Collapse Section

Attack surface analysis involves mapping all attack vectors within the organization. It helps find risk areas and vulnerable systems for organizations to minimize as many attack vectors as possible.

Table 1: Threat Analysis

Asset	Security Property	Damage Scenario	Threat Scenario	Impact Analysis				Justification
				Stakeholder: Road User				
				S	F	O	P	
Access to key details	Authenticity	An unknown third party can access the car using an intercepted access token	Spoofed messages	0	2	1	3	Key details leaked, but the car is still operable and safe
	Integrity	An unknown third party able to access a car with a fraudulent access token	Tampered messages	0	2	1	3	Key details leaked, but the car is still operable and safe
	Non-repudiation	The user unlocked the car but is not identifiable	Replay of intercepted messages by attacker	1	2	2	1	Either guest user or attacker
	Confidentiality	Access to key details shared beyond the trusted group	Unauthorized disclosure of messages via social engineering	0	3	1	3	High privacy impact as key detail shared with the attacker who knows the user
	Availability	Access to key information is impossible, and road users are not able to unlock the car	Denial of service attack on key-sharing platform	0	1	3	1	No Safety implication as the car cannot be moved
	Authorization	Guest users are unexpectedly able to access key detail	Elevation of privilege in the guest user database	2	1	2	1	Can have safety implications for assisted driving models

Discussion

IBM

Table Properties [X]

Rows*
9

Columns*
9

Headers
First Row ▾

Caption
Table 1: Threat Analysis

Cancel OK

Cell Properties [X]

Width: 21 [pxe ▾]

Height: 30 [pxe ▾]

Cell Type: Data ▾

Background Color: #FF7E79

Rows Span: []

Columns Span: []

Cancel OK

TaP: Other Enhancements

Magic line

Add a paragraph using the magic line capability from otherwise inaccessible places in the active editor like tables and indented text that start or end a document.

Planning-General configuration

Separate tabs for different planning configuration elements in web client to allow admin to set the Backlog Iteration for a child project area without overriding the rest of the configuration.

SAFe 6 templates

SAFe 6.0 Full and Essential templates are now available to establish a portfolio, large solution, ART, and team-level tooling environment.

Static text available for print

View static text and static rich text values when you print a work item.

Size of the drag & drop dialog

The size of the drag & drop dialog for linking work items and uploading attachments has been increased to make it easier to perform the actions.

Performance Improvements

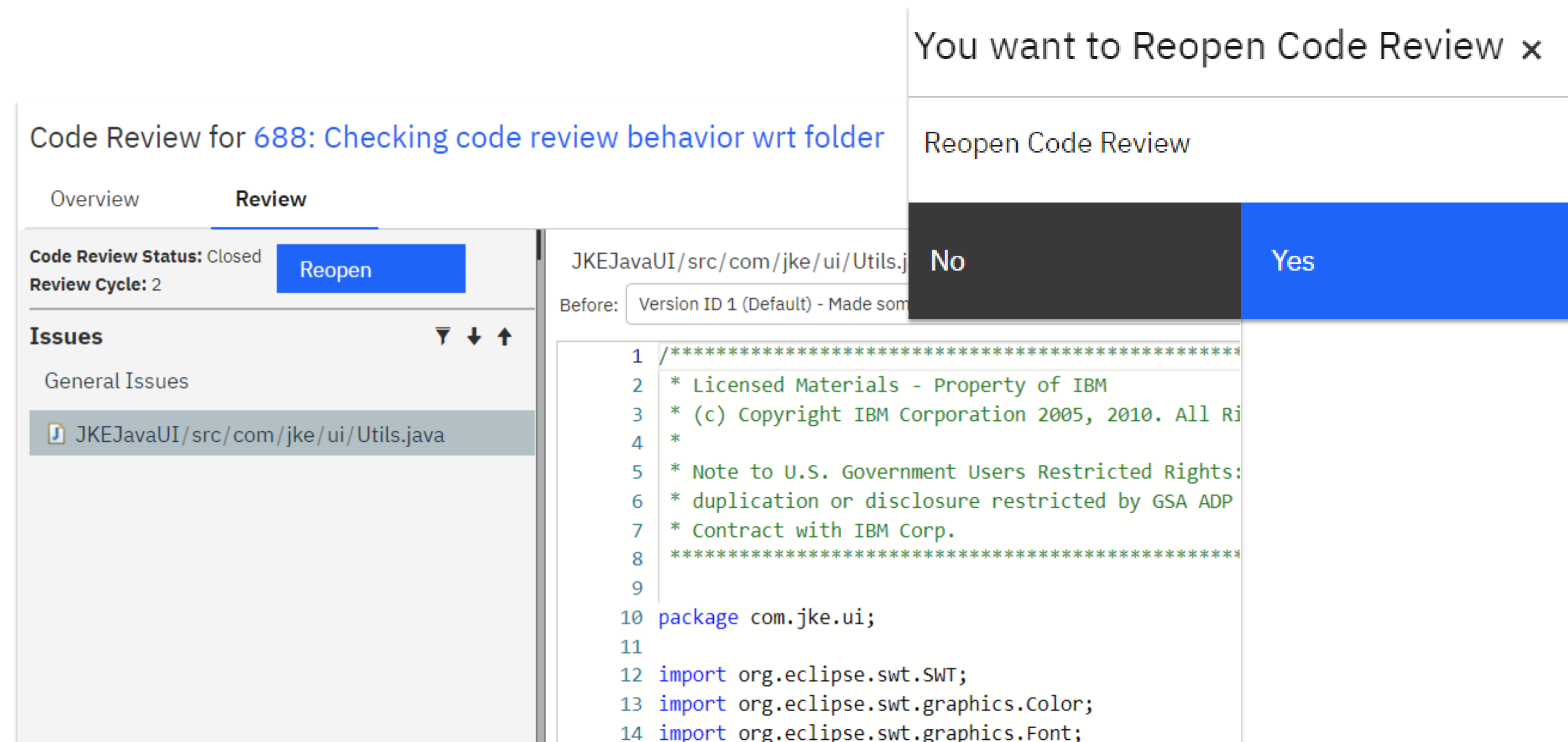
Improved load time of work items in environments with many custom attributes paired with many users and project areas.

Improved loading of plans when there are large numbers of concurrent users performing operations

Code Review Enhancements

Reopen a closed code review

You can reopen a closed code review with Jazz Admin and Jazz Project admin roles.



Improved logging of change sets appearing for code review

For special cases when there is a mismatch between the count of change sets displayed under work item and code review, happening due to related permissions or any other unexpected scenario.

SCM: Other Improvements

Improved search

Modified the text with "Search Current Page" in search box, same changes done and reflect for workspace and advance search result search box.

CLI improvements

Output of CLI locate command clearly states what changesets are directly included and which are indirectly included through a change set created by a gap merge.

Default logging enabled for CLI exceptions when running a command.

Serviceability

Additional logging for easier debugging in future and checks to guard against the case when event timestamp in query and event table were out of sync.

Improved logging to collect traces when upload of a large file.

Reliability

Improved change event processing to ensure that each change event uses a different category id to avoid missing events esp. if a new feed is added in the future.

Git-Jenkins integration improvements

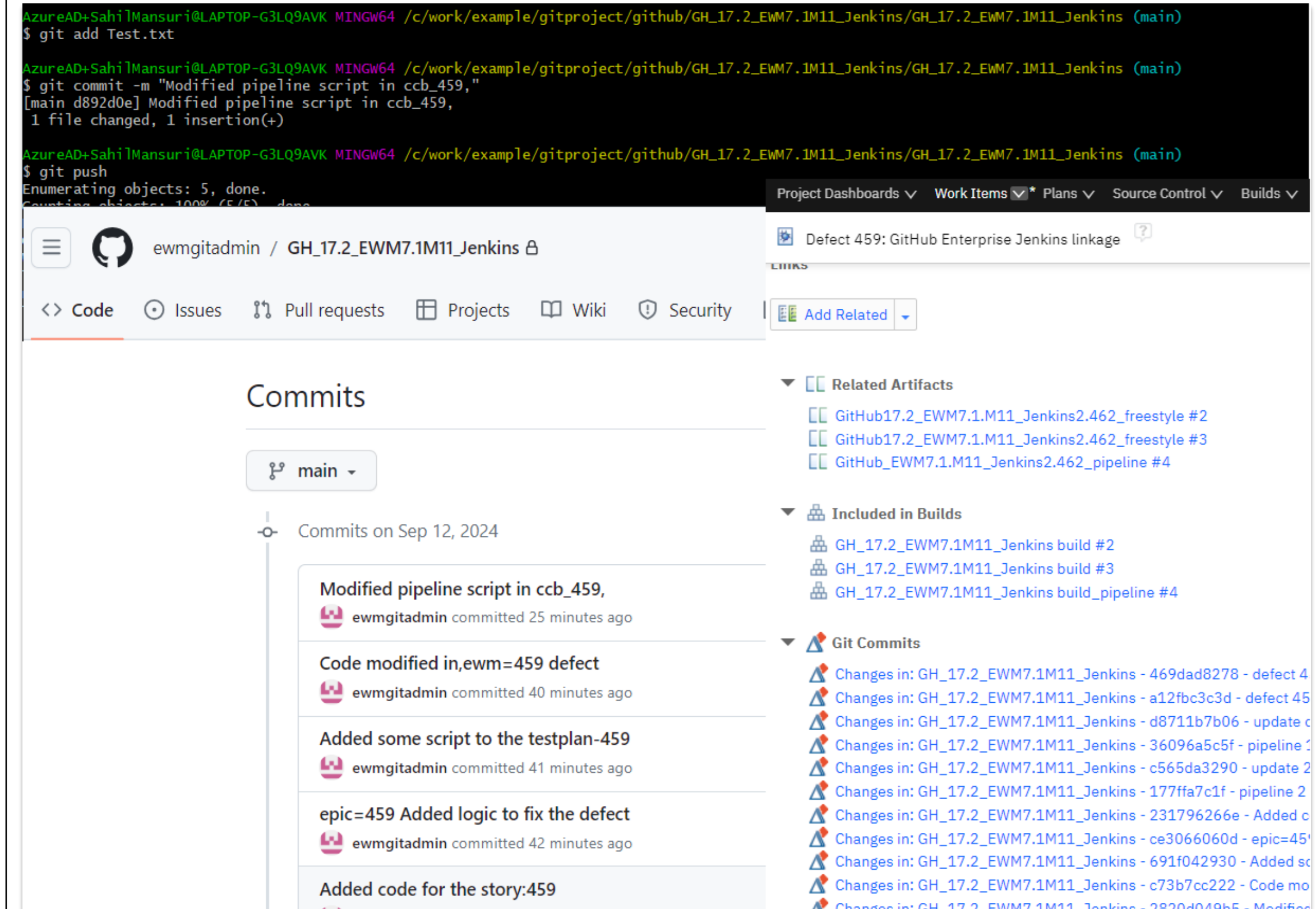
Improved flexibility with grammar used for Engineering Workflow Management Git integration

- Engineering Workflow Management now supports more keywords and delimiters to provide a more flexible grammar for linking work items in EWM-Git integration.
- The supported keywords that can be used in the commit message are workitem, work item, work-item, issue, feature, defect, ewm, story, epic, testplan, test plan, test-plan, ccb, bug, task, wi, and rtcwi.
- The supported delimiters are hyphen (-), underscore (_), colon (:), equal (=), and white space ().

The default grammar is also now consistent for pre-receive hooks, post-receive hooks, and webhooks. For more information, see [Creating links from commit message](#).

Security fix for Team Concert Git Jenkins plugin

A new version of Team Concert Git Jenkins plugin, version 2.0.5 is now available. This version includes crucial security fixes and is available for download at <https://updates.jenkins.io/download/plugins/teamconcert-git/2.0.5/teamconcert-git.hpi>.



Workflow Management currency upgrades

Eclipse

Eclipse 4.23 via IM and p2 install

Eclipse 4.27 via p2 install

Eclipse 4.31 via p2 install

Visual Studio

Visual Studio 2022

Visual Studio 2019

Visual Studio 2015 is no longer supported.

Git Integration Toolkit

GitHub Enterprise v3.14, v3.12

GitLab v17.2, v17.0.3

Git v2.45

Gerrit v3.10

Node.js v20.0 and v22.4

Jenkins

Jenkins v2.458, v2.462.1 and future fix packs

Latest version of plugin: TC- Jenkins v2.4.4 plugin
and TC-Git-Jenkins v2.0.5 plugin

Rhapsody Model Management

Rhapsody Model Manager 7.1

User features and productivity

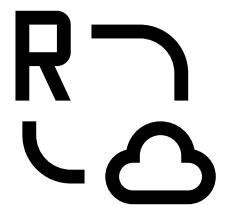
- Model-to-model linking with RMM
- Simplified linking: "Copy & Paste" + "Drag & Drop" between RMM browser windows
- Model element type icons are now displayed in the RMM UI (due to Systems Profile added to RMM server deployments)
- Sidebar Explorer: Links, diagrams, tables, and matrices now have their own tabs, making it easier to access the information when needed and reducing overall page clutter by minimizing scrolling.
- Quick search now works on the sidebar explorer

Governance

- New role-based permission for Link Validity status changes

Aids to correctness, configuration, and visibility

- Stream names are displayed on component nodes when working in a global configuration aware context.
- Component skew detection: Decorator text added to component nodes that exists in multiple local configurations of the selected global configuration hierarchy.
- The component limit can be configured for viewing.
- Rhapsody DiffMerge is now available as a selectable (pre-configured) external compare tool in the 7.1 Engineering Workflow Management (EWM) Eclipse client.

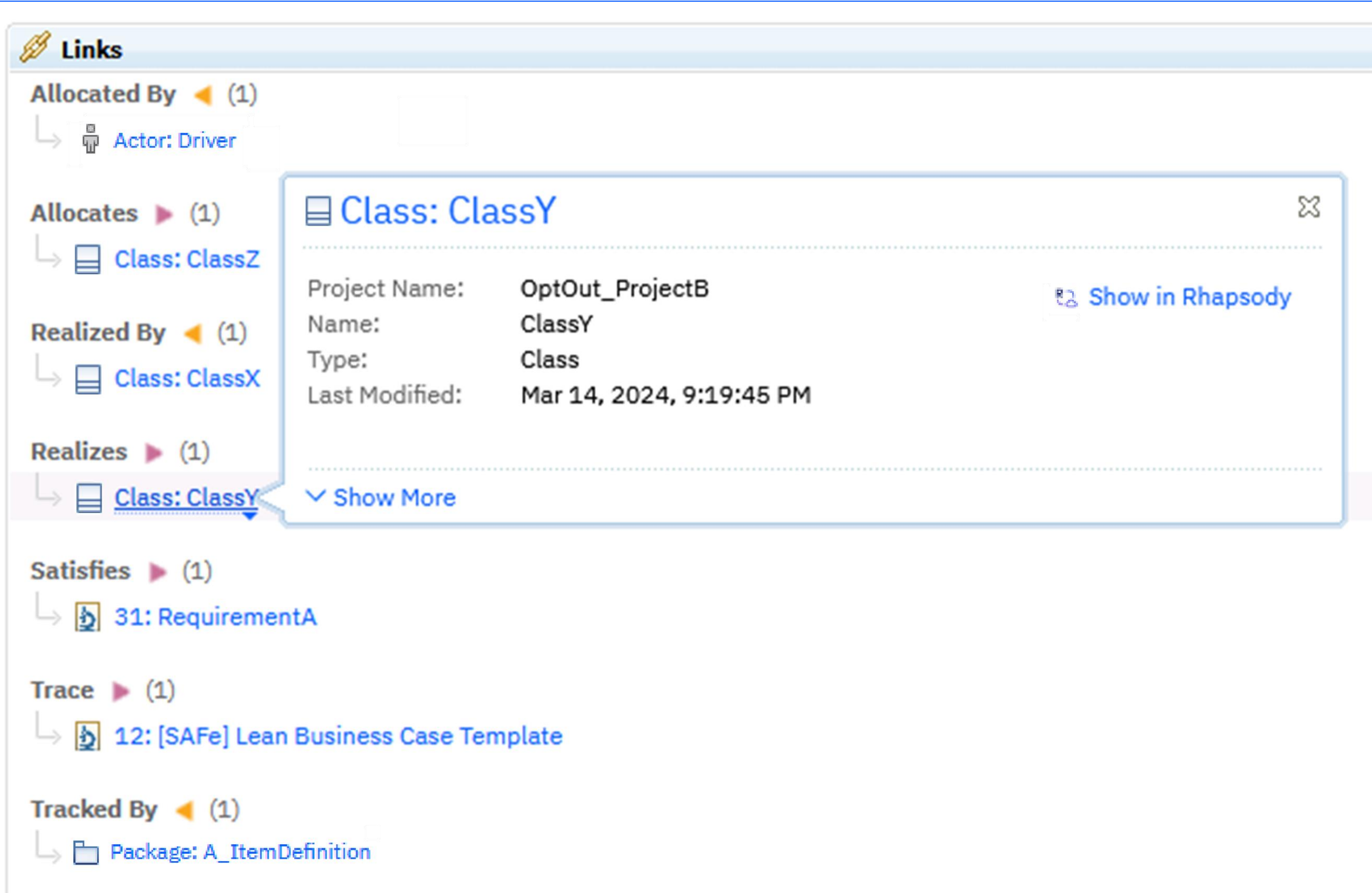
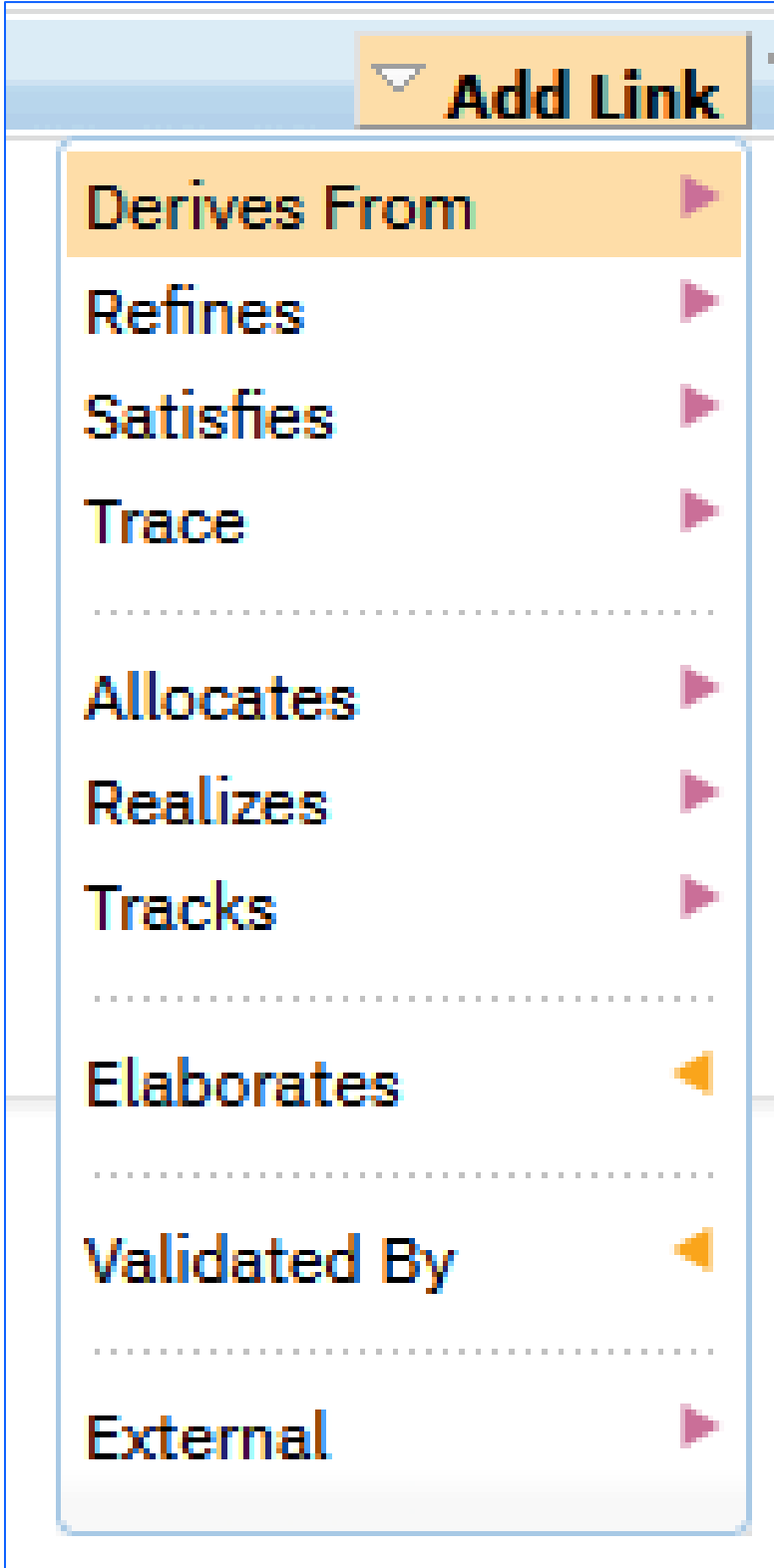


Model-to-model linking with RMM

OSLC-AM consumer as well as provider

- Link Rhapsody model elements across servers or project areas
- Link Rhapsody SysML/UML model elements with Rhapsody Systems Engineering SysML v2 model elements
- Link with other tools implementing OSLC-AM (e.g., PLM Bill of Materials)

Simplified linking: "Copy & Paste" + "Drag & Drop" between RMM browser windows



Enriched user experience with RMM

Model element type icons are now displayed in the RMM UI (due to Systems Profile added to RMM server deployments)

Sidebar Explorer: Links, diagrams, tables, and matrices now have their own tabs, making it easier to access the information when needed and reducing overall page clutter by minimizing scrolling.

Quick search now works on the sidebar explorer

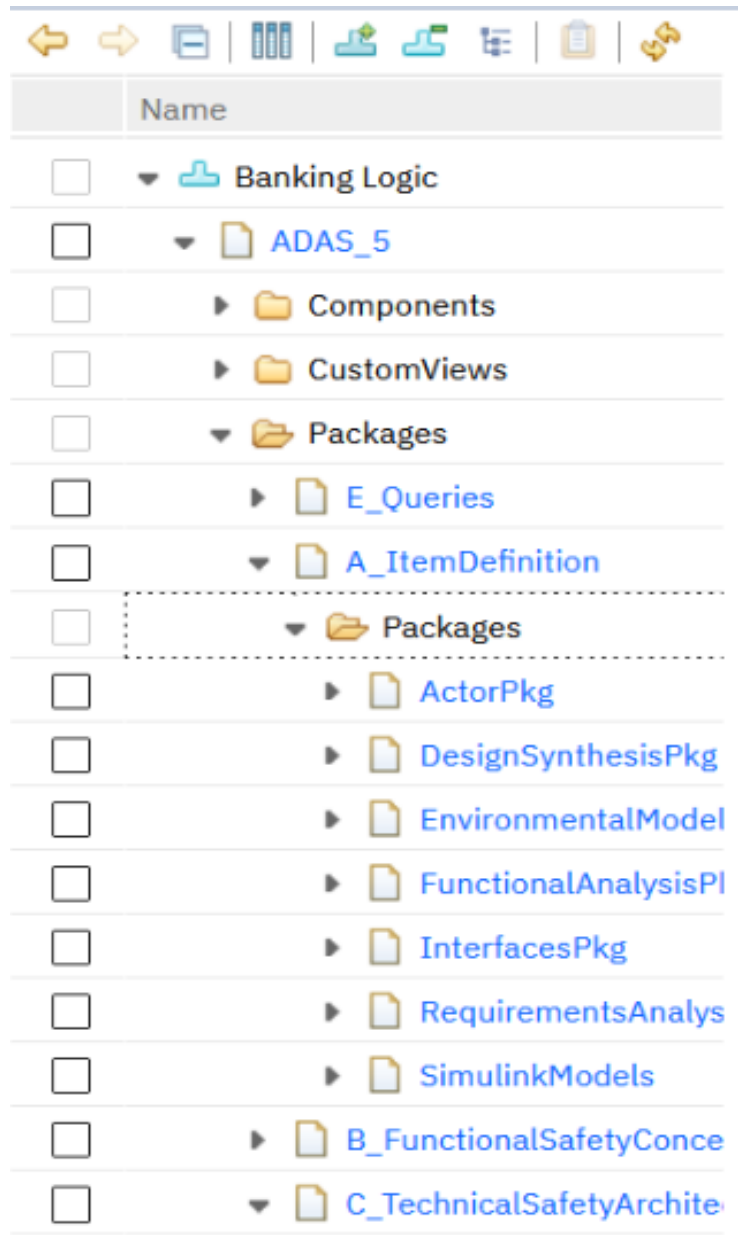
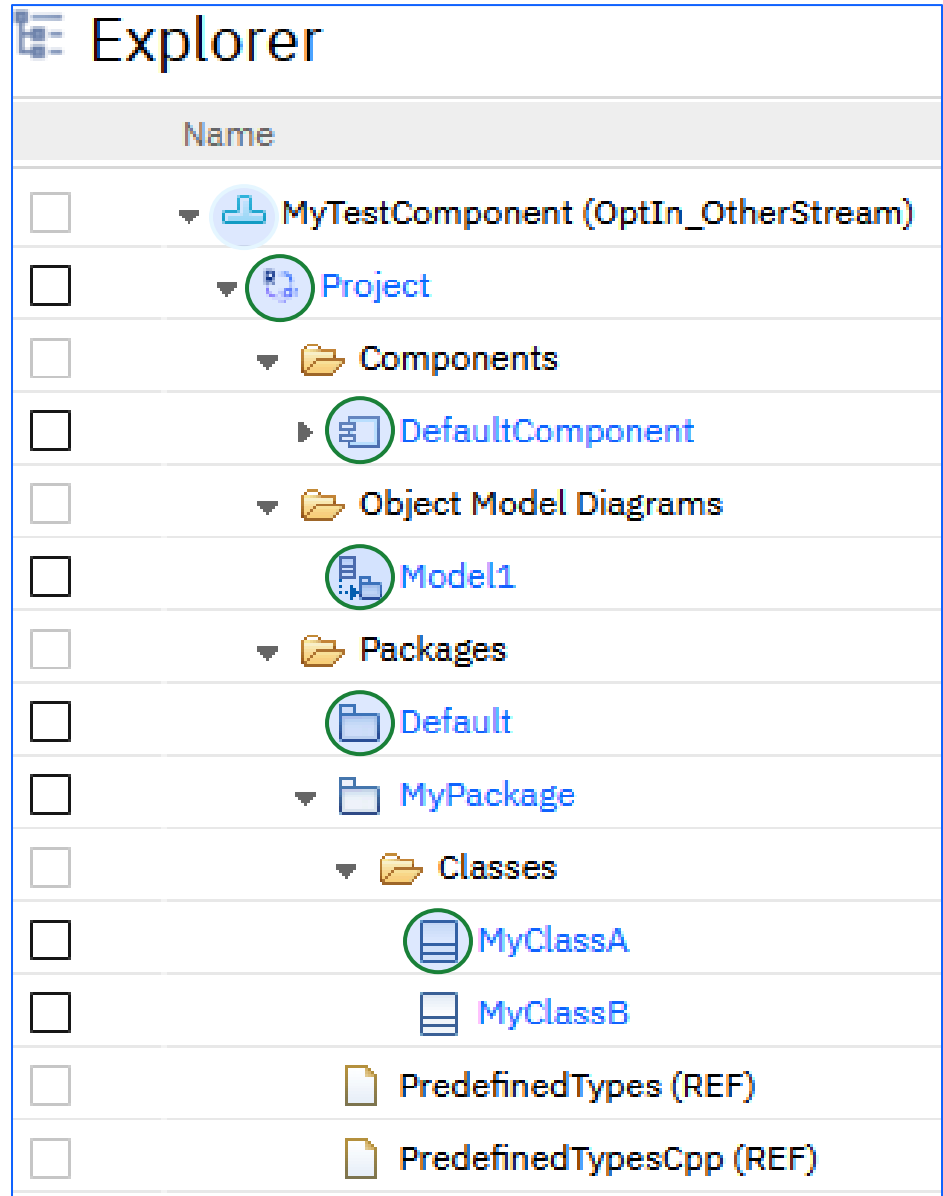
Governance: new role-based permission for Link Validity Status changes

Stream names are displayed on component nodes when working in a global configuration aware context.

Component skew detection: Decorator text added to component nodes that exists in multiple local configurations of the selected global configuration hierarchy.

Rhapsody DiffMerge is now available as a selectable (pre-configured) external compare tool in the 7.1 Engineering Workflow Management (EWM) Eclipse client.

The component limit can be configured for viewing.

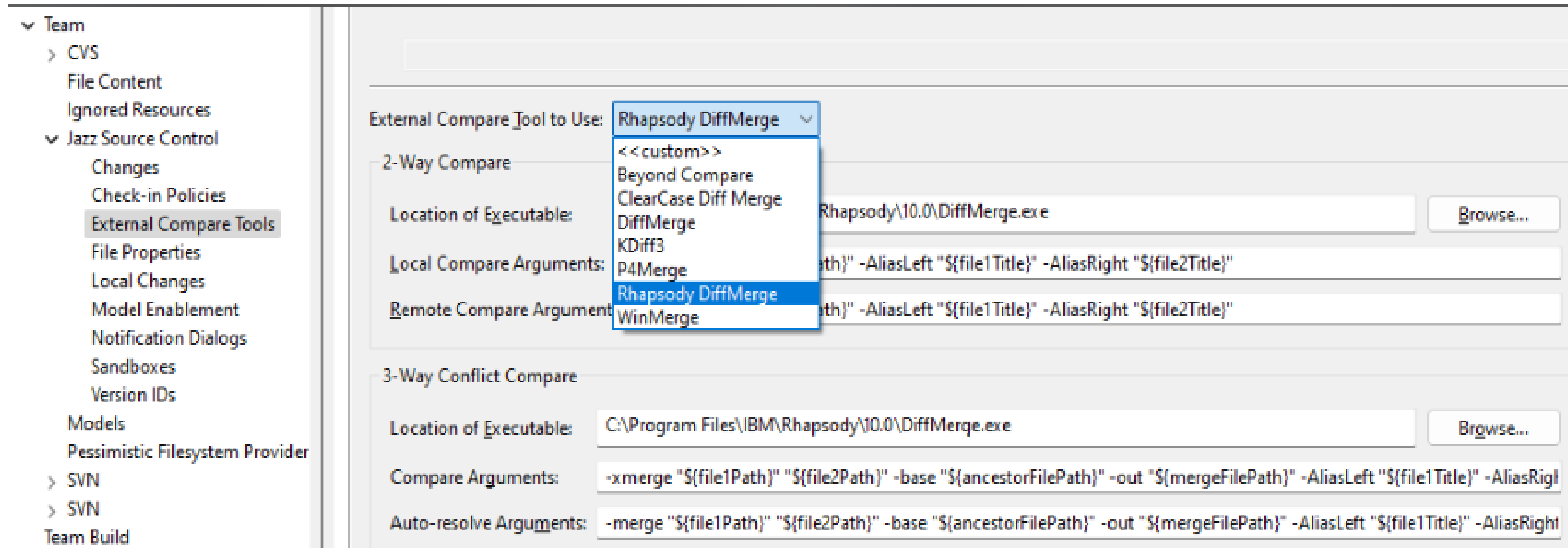


TableView: PhysicalSystemsAllocation

Overview Links Table View

Found 30 elements

Name	Owned by	ASIL	Allocat...
ACC2SpdD...	CruiseControl	C	Hardware
ADAS_UsageAnalysis	C_TechnicalSafetyArchitectu...		
BrakingAnalysis	C_TechnicalSafetyArchitectu...		
CCM	CruiseControl	C	Software
DriverComfortAnalysis	C_TechnicalSafetyArchitectu...		
ECM	EngineManagement	B	Software
EnvSensors	C_TechnicalSafetyArchitectu...		
itsAccelerometer	C_TechnicalSafetyArchitectu...		
itsADASGateway	C_TechnicalSafetyArchitectu...		
itsADASMonitoringService	C_TechnicalSafetyArchitectu...		
itsBMxGW	C_TechnicalSafetyArchitectu...		
itsBrakeControlModule	C_TechnicalSafetyArchitectu...		
itsBus	ArchitecturalDesign		



Test Management

Engineering Test Management 7.1

User productivity

- Enforce name uniqueness for configurations
- Updated names for Rational automated test script type



Enforce name uniqueness for configurations

IBM Engineering Test Management (/qm)

Z-CM-001-QM

Project Dashboards ▾ Requirements ▾ Planning ▾ Construction ▾ Lab Management ▾ Builds ▾ Execution ▾ Reports ▾ Change Requests ▾

Manage Project Properties

[i This page contains unsaved changes. \[show details\]\(#\)](#) [Cancel](#) [Save](#)

Properties | Artifact Categories | Custom Attributes | Risks

- Artifact Export Preferences
- Automated Test Preferences
- Build Provider
- Configuration Management Preferences**
- Execution Preferences
- Execution Record Preferences
- Execution States
- Lab Resource and Channel Properties
- Link Validity
- List View Queries
- Manual Script Preferences
- Project Execution Variables
- Quality Objectives
- Related Sites
- Report Properties

Configuration Management Preferences [?](#)

- Enforce name uniqueness for configurations.
- Test case results and test suite results:
 - Exclude from new streams
 - Exclude when you merge into a stream
 - Exclude when you clone from a component
- Test case execution records and test suite execution records (these force selection for results):
 - Exclude from new streams
 - Exclude when you merge into a stream
 - Exclude when you clone from a component

Updated names for Rational automated test script types

IBM Engineering Test Management (/qm)

Z-CM-001-QM | Z-CM-001-QM

July23 stream | Pam Turner

Project Dashboards | Requirements | Planning | Construction | Lab Management | Builds | Execution | Reports | Change Requests

To access artifacts in other applications, you must work in a global configuration context. [show details](#)

Test Scripts / New / Not Yet Saved

< Enter New Test Script Name >

Test Script

Sections

- Summary
- Formal Review
- Test UI Script Details**
- Execution Variables
- Show All Sections

Component:* Z-CM-001-QM

Configuration: July23 stream

State: Draft Action: Change State

Originator: Pam Turner Owner: Unassigned

Type: DevOps Test UI

- Command Line
- DevOps Test Embedded
- DevOps Test Integration and APIs
- DevOps Test Performance
- DevOps Test Performance for SOA Quality
- DevOps Test UI**
- DevOps Test Workbench
- JUnit Selenium
- Manual
- Rational AppScan Tester Edition
- Rational Robot

Test UI Script Details

This will create a Test UI Script

Use test resources on a test machine already. Choose test resources at execution time.

Use test resources on a test machine already. Choose test resources that are on a test machine already. At execution time, the resources at the location you choose will be used.

Shared Resource Location: _____

Quality Task

Cancel Save

Related Sites 2

- IBM Engineering Lifecycle Management
- IBM Engineering Test Management

Parent Test Cases

Related Test Plans

Related Test Suites

Associated Keywords

Used by Scripts

Jazz Reporting Service + Link Index Provider

Jazz Reporting Service 7.1

User features and productivity

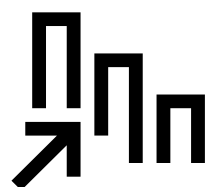
- Report on additional historical metrics when using LQE
- View data source schema details with the Type explorer, making it easier to write advanced queries
- It's easier to use custom attributes from child artifact types when reporting on top-level artifact types in LQE reports
- Move a report to new folder by dragging over the breadcrumb node

JRS higher performance and availability

- LQE relational store is now the default for LQE
- LQE rs performs significantly better than LQE Jena. Long-running queries do not block other users.
- Link Index Provider via LQE rs (better performance and one less server!)
- Report Builder search is faster
- Other query performance optimizations
- Automated server rename for LQE rs (no need to reindex!)
- New TRS validation in LQE replaces data source reindexing for recovering from data gaps

Observability and serviceability

- LQE provides more kinds of admin notification events for monitoring LQE health
- Admin can monitor the configuration scope of queries in the LQE, which can be useful in advising users to reduce config scope of long-running reports
- Additional diagnostics and logging for admin intervention and problem determination



For practitioners

Report on additional LQE historical metrics

You can report on these additional dimensions using Lifecycle Query Engine **historical metrics**

Work Item **Closure**

- Filed Against
- Resolved
- Resolution
- Team Area

Work Item **Totals**

- Found in
- Priority
- Resolved
- Resolution
- Severity
- Team Area

Work Item **Creation**










- Found In
- Resolved
- Resolution

Add condition

Attributes of:

Choose an attribute: 

- Filed Against 
- Found In 
- Iteration 
- Priority 
- Project Area 
- Resolution 
- Resolved 
- Severity 
- Status 

Select valid filter values to continue.

Report Builder supports wildcards for additional operators on string properties

- A **Supports wildcards** checkbox is added in the Report Builder for query conditions on string properties. By default, the checkbox is set to true when the "contains" or "does not contain" operator is selected and false for all the other operators. However, you can change that based on the requirement.
- Previously, the Report Builder used an unquoted asterisk as a wildcard for the "contains" and "does not contain" operators. When the unquoted asterisk was specified for "is", "is not", "starts with", or "ends with", the asterisk was always treated literally.
- If you select the **Supports wildcards** checkbox, an unquoted asterisk is taken as wildcard for all the operators. If the **Supports wildcards** checkbox is not selected, an unquoted asterisk is taken literally. For more information, see [Querying on string properties](#).

Add condition [Close]

Attributes of: Feature [Type: Feature] ▾

Choose an attribute: [?] [X]

- COE Architect
- Complexity
- Correction [?]
- Creation Date
- Creator
- Description
- Due Date
- Epic Hypothesis Statement
- Estimate [?]
- Estimated Story Points (ALM Portfolio (CCM

Choose values [?]

Description contains ▾

- No set value
- [?]
- Supports wildcards

Your selection: **Description (Feature)** contains **\"Hello\"**

- Locked:** Users cannot edit when running the report.
- Unlocked + optional:** Users can edit when running the report.

[Close] [Add and Close] [Add]

Creating simpler reports across subtypes in reports with LQE data source

When reporting across multiple child types that shared a common parent type such as Work Item or Requirement using an LQE data source, you would previously create a report using the merge or append of multiple report branches, that could lead to repeating traceability paths in each branch making the report more complex to maintain and slower to perform.

Now you can use external URIs to promote them into the parent type and create single branch reports with LQE data source that can return and filter on those promoted properties including common filtering across sub-types from the same parent type.

To distinguish subtype attributes, after attribute in the brackets, the word **Promoted** is added. The end result should be simplified report creation and most likely improved report performance when there is a large number of subtypes.

Add condition

Attributes of: Requirement [Type: Requirement] ▾

Choose an attribute: ?

Search [x]

Include attributes from subtypes

Category Type (Promoted)

Component ?

Contributor

Crea

Crea

Desc

Forei

Forei

Forei

Forei

Select v

Add attributes to the report

Attributes of: Requirement [Type: Requirement] ▾

Search [x]

Include attributes from subtypes

Select all

Category Type (Promoted)

Component ?

Contributor

Count artifact versions ?

A help when writing advanced queries: RB Type explorer documents data schemas

- You can view data source schema details for all data sources (LQE rs, LQE Jena and DW) and use it to develop reports in Report Builder (RB). From the **Help** menu in RB, click **Type explorer** to view data source schema details. Filter the details based on data source, data type, categories, and artifacts.

- Use this information to understand the structure and dependencies of the data source schema. By using the detailed insights about the data source schema, you can create custom SQL queries and develop reports in RB.

The screenshot displays the 'Type explorer' interface in IBM Engineering Report Builder. The left sidebar contains filters for 'Data source' (Lifecycle query engine sc...), 'Data type' (Current data selected, Historical trends), 'Categories' (Change and Configuration management selected), and 'Artifacts' (Approval selected). The main area shows the 'Approval' data source details, including its ID (rtc_cm:Approval), hidden status (true), item table (RITRS.WORK_ITEM_APPROVAL), and URI (http://jazz.net/xmlns/prod/jazz/rtc/cm/1...). Below this is a table of attributes with columns: ID, Title, Description, Range, URI, Column, and Table.

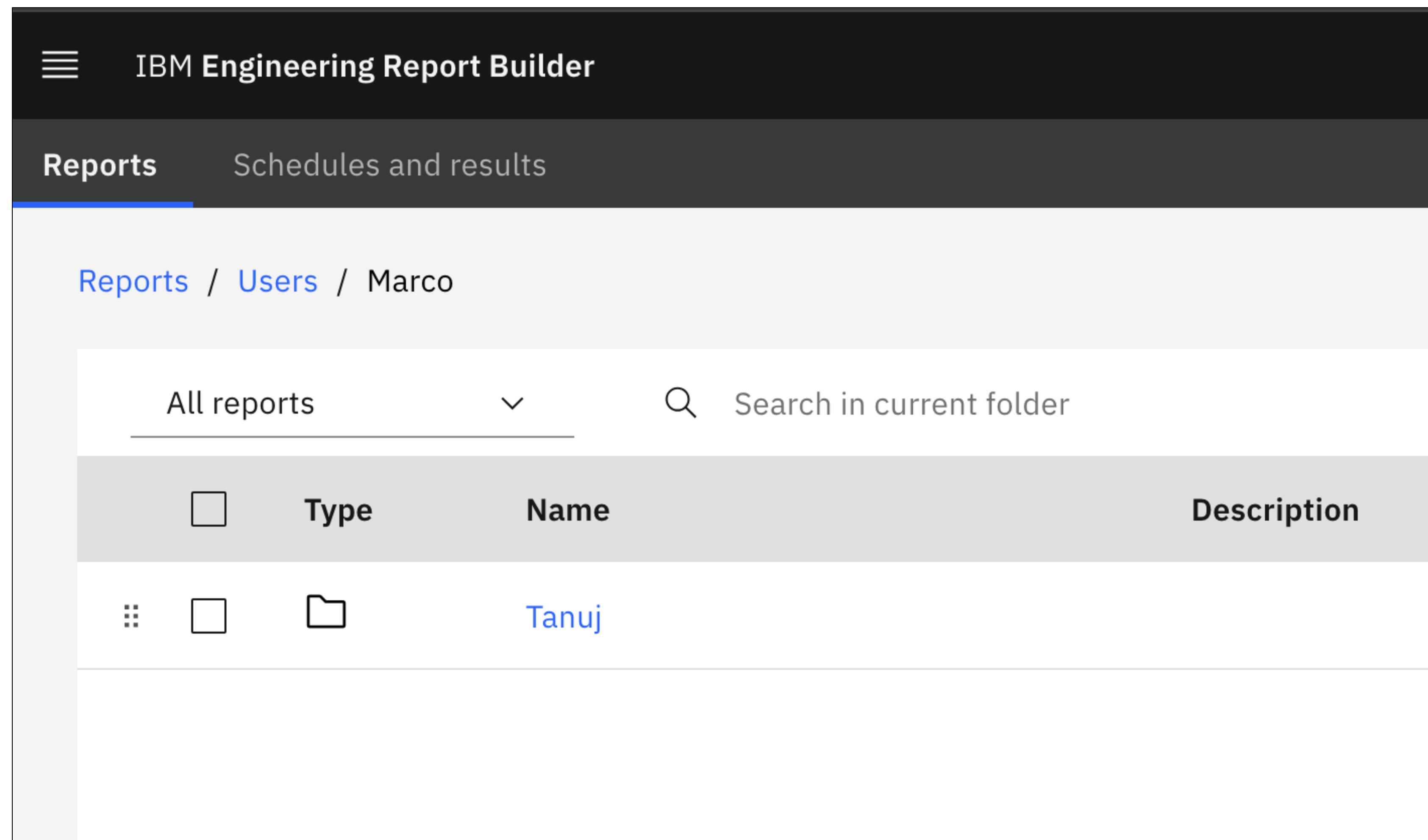
ID	Title	Description	Range	URI	Column	Table
jrs:versionSkew	Count artifact versions	Add this attribute to ...	http://www.w3.org/2...	http://jazz.net/ns/jrs...		RITRS.WORK_ITEM_...
rtc_cm:approvalDue	Due	The due date for an a...	http://www.w3.org/2...	http://jazz.net/xmlns/...		RITRS.WORK_ITEM_...
dcterms:title	Title		http://www.w3.org/2...	http://purl.org/dc/ter...	NAME	
rtc_cm:approvalType	Type	The type of the appro...	http://www.w3.org/2...	http://jazz.net/xmlns/...	APPROVAL_TYPE	
xsd:anyURI	URL		http://www.w3.org/2...	http://www.w3.org/2...		RITRS.WORK_ITEM_...

Move items by dragging over the breadcrumb node

In Report Builder, you can now move items to any parent folder using the breadcrumb.

Previously, to move or copy one or more items to a parent folder, you had to select the items and then use the **Move** feature to move them to the intended folder.

With this new feature, you can simply select and drag the items over the breadcrumb node to move them to the desired parent folder. For more information, see [Moving reports or folders](#).



Optimized the searching feature in Report Builder

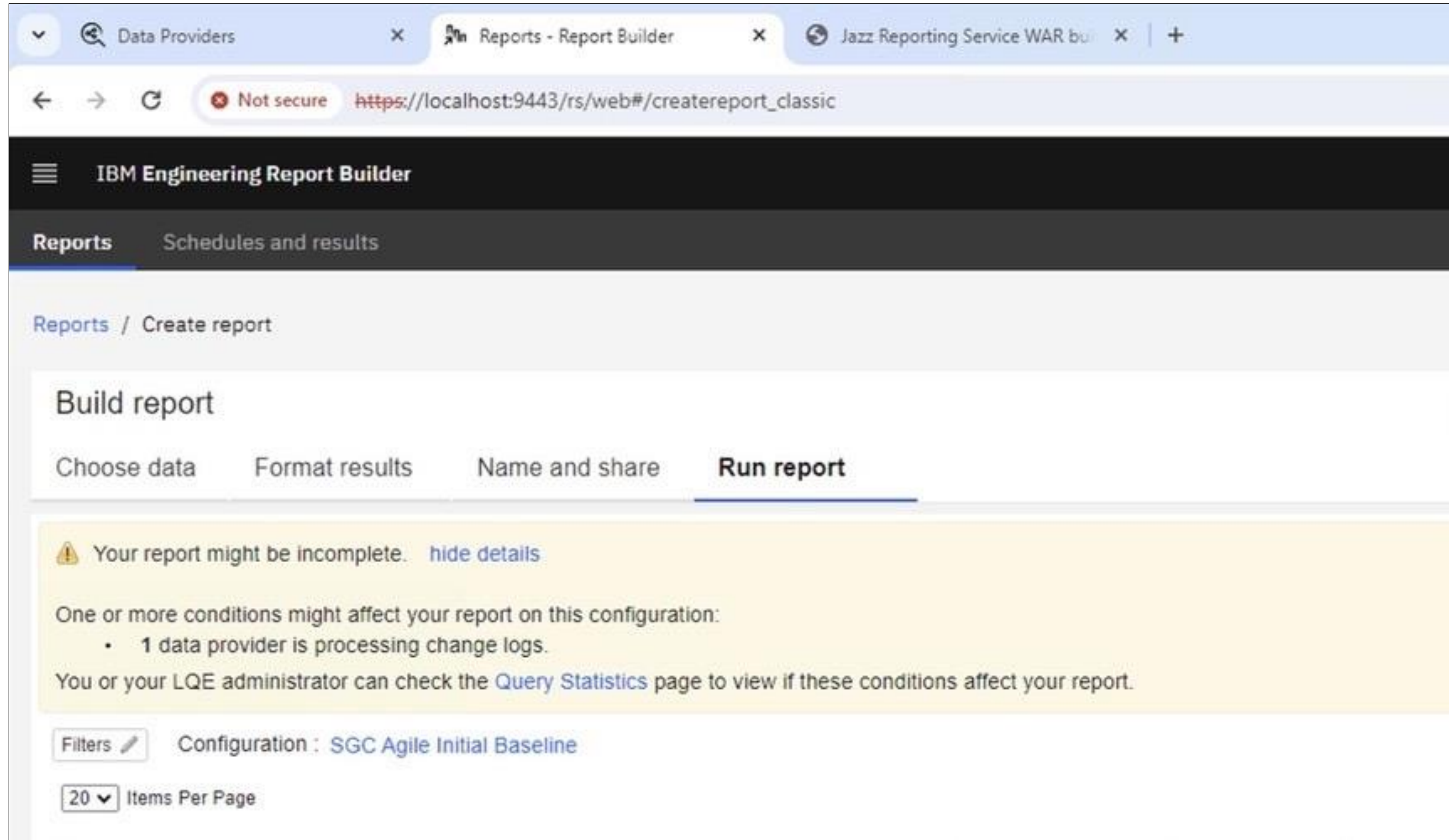
- As part of JRS 7.1, team focused to improve performance of the **Search all folders**. Search change made to follow MS Windows Explorer behavior. With this update, report search process is optimized by setting the scope of your search to include the subfolder, starting from the current folder in the RB. Previously, selecting **Search all folders** would search all the folders in RB.
- Search in current folder – cached data with almost instantaneous results.
- The **Search all folders** button is updated to **Search including subfolders**.
- You can still search all folders from root level.
- For more information, see [Searching](#).

The screenshot shows the IBM Engineering Report Builder interface. At the top, there is a navigation bar with 'Reports' and 'Schedules and results' tabs. Below this, there is a search bar with the text 'Search including subfolders' and a magnifying glass icon. To the right of the search bar, there is a toggle switch labeled 'Search including subfolders' which is currently turned on. Below the search bar, there is a table with columns: Type, Name, Description, Last modified, and Tags. The table contains three rows of folders: 'Imported', 'Projects', and 'Ready-to-copy'. The 'Ready-to-copy' folder is highlighted with a blue box.

Type	Name	Description	Last modified	Tags
Folder	Imported	Reports in this folder are typically imported from another instance of Report Builder.		
Folder	Projects	Reports in this folder should contain sub-folders that organize reports based on the spec...	03/28/2024 1:0...	
Folder	Ready-to-copy	Reports in this folder are visible in the All reports view. These reports can be used as te...	03/15/2024 1:2...	

Improved Data completeness check feature

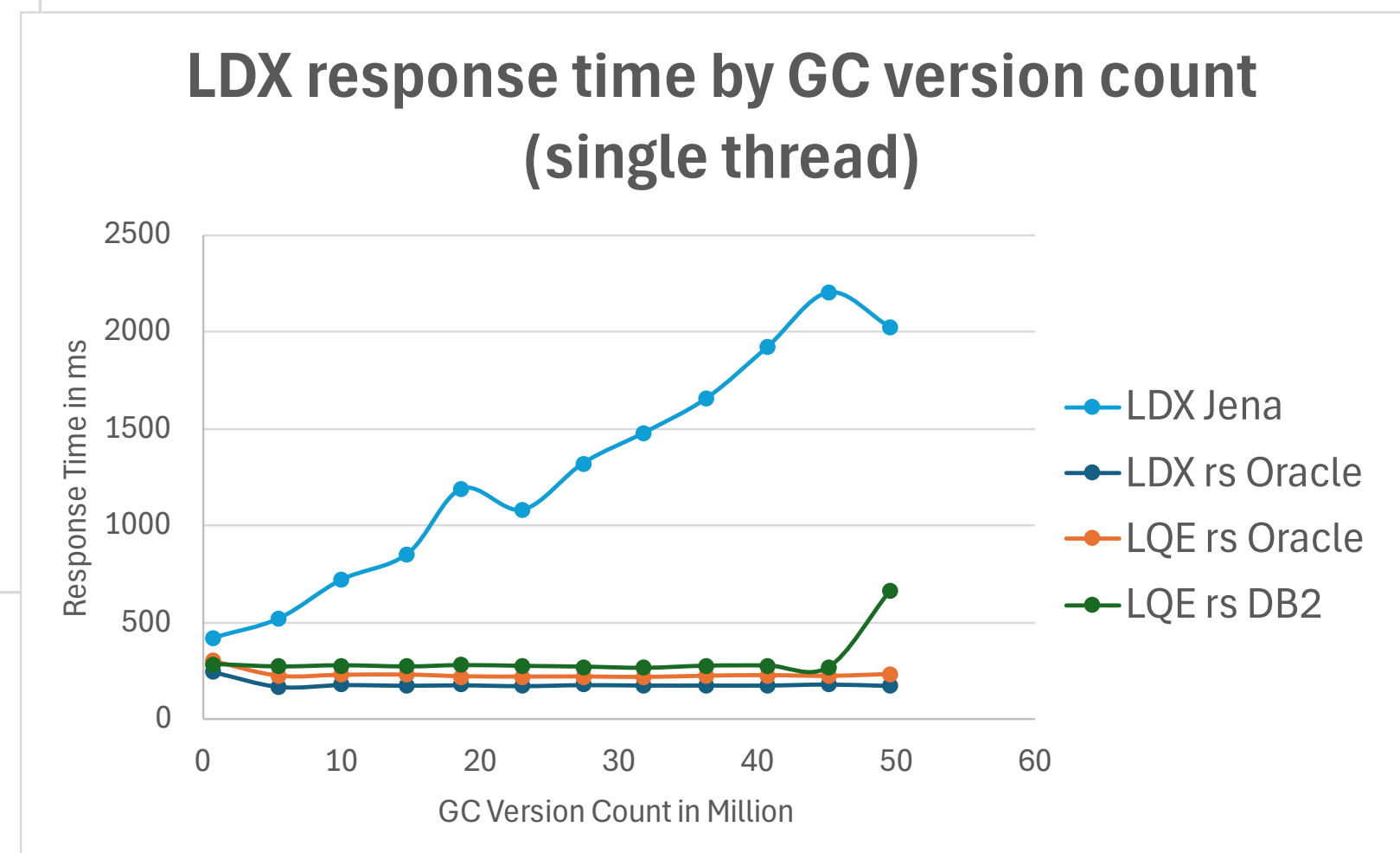
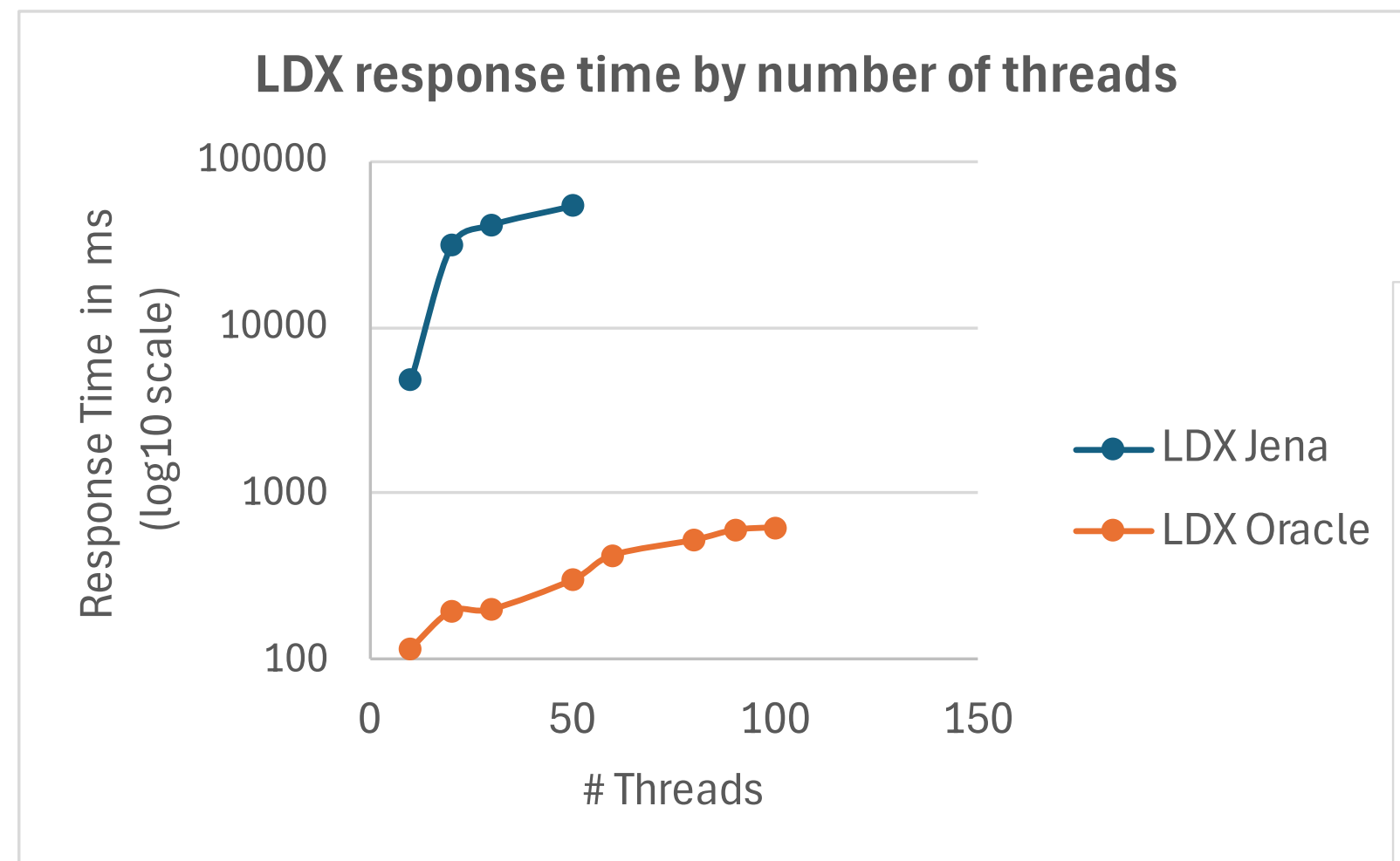
- When you perform the data completeness check for a report in Report Builder, you can now view the message about number of data sources that are processing the change logs.
- If the message states that the LQE is processing the change logs, it implies that the data might be incomplete, and your report might be impacted. You should wait until the LQE completes the change log processing and is up to date.
- For more information, see [Run the report with data completeness check enabled](#).



For administrators

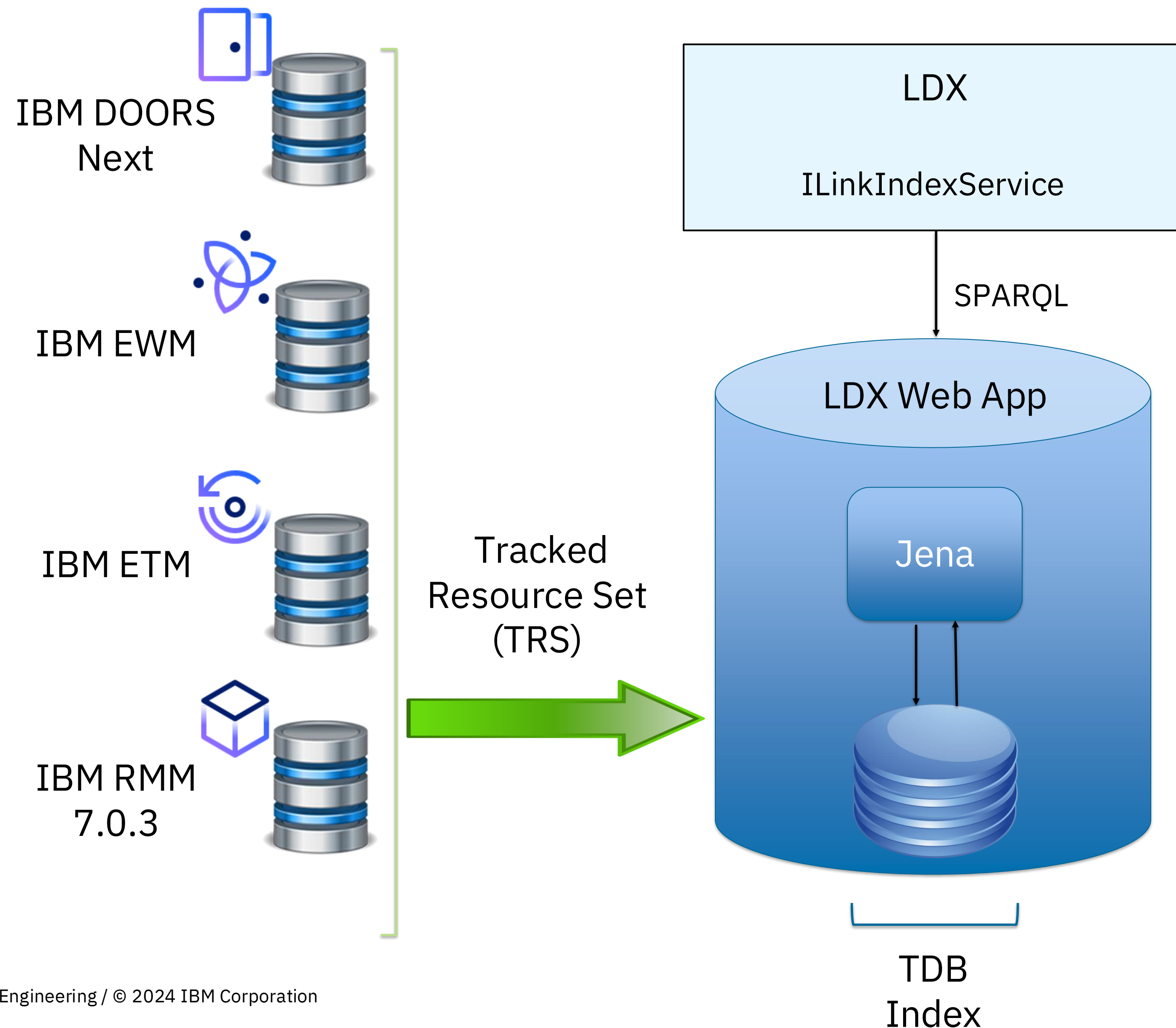
Major improvements using Lifecycle Query Engine relational store (LQE rs and LDX)

- LQE rs is the default installation for new JRS deployments
- It offers significantly better performance and availability than LQE Jena: Generally faster queries, higher concurrency, less RAM required.
- Improvements are so good* that we now recommend using LQE rs for Link Index Provider (LDX) as well. [LDX rs 7.1 performance report](#).
- Enable LQE rs during JTS setup. Report Builder detects whether LQE relational store is enabled. If so, then Report Builder enables LQE rs for reports.
- When LQE Jena is not installed or disabled, only SQL query language is supported, and query language options are not visible
- During the time that ELM 7.1 is deployed in your organization, plan to convert all remaining RB SPARQL reports to SQL. ELM 7.1 is the last version that will include LQE Jena.



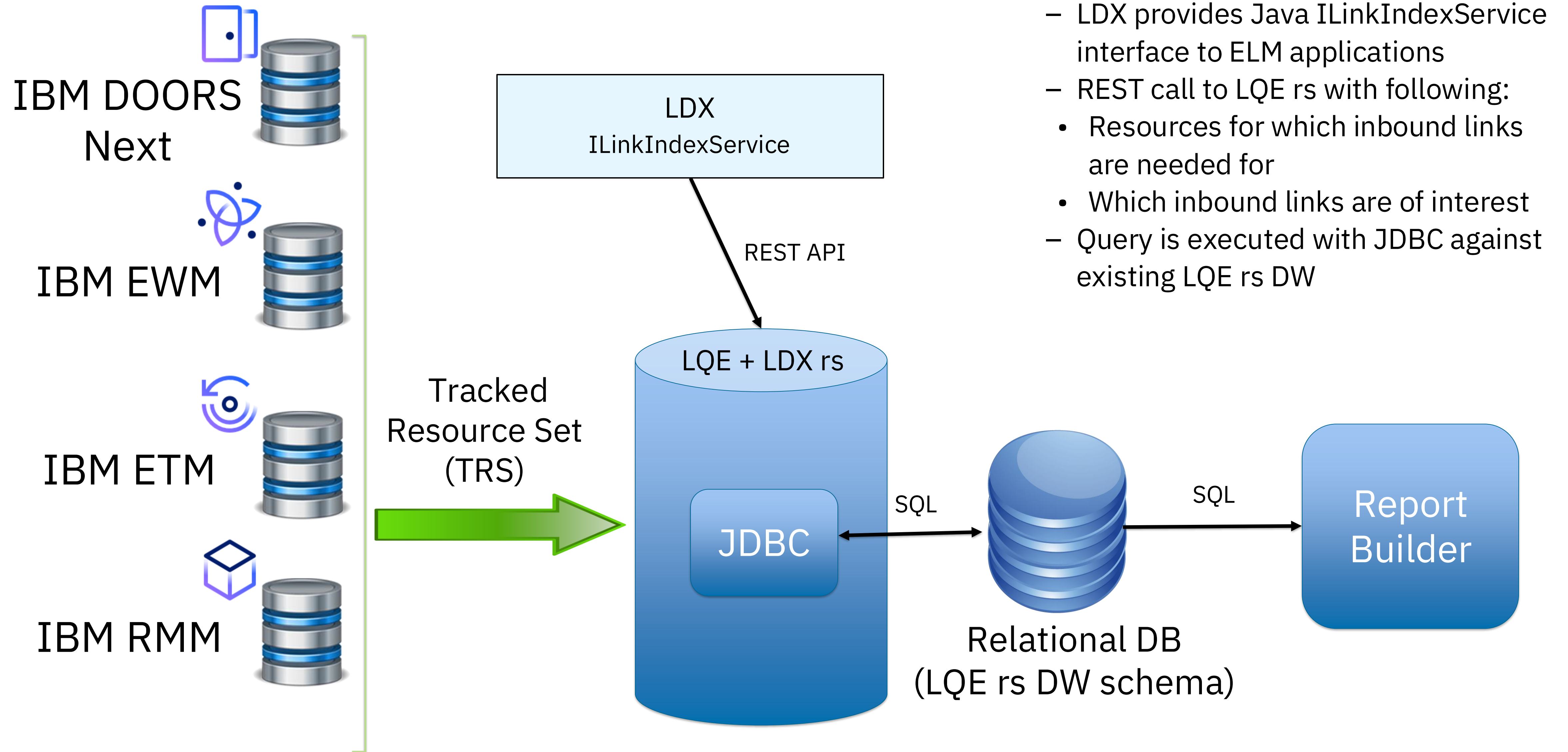
** Tested in IBM lab; your performance may vary*

LDX in 7.0.3 and earlier was a separate application (a special case of LQE)



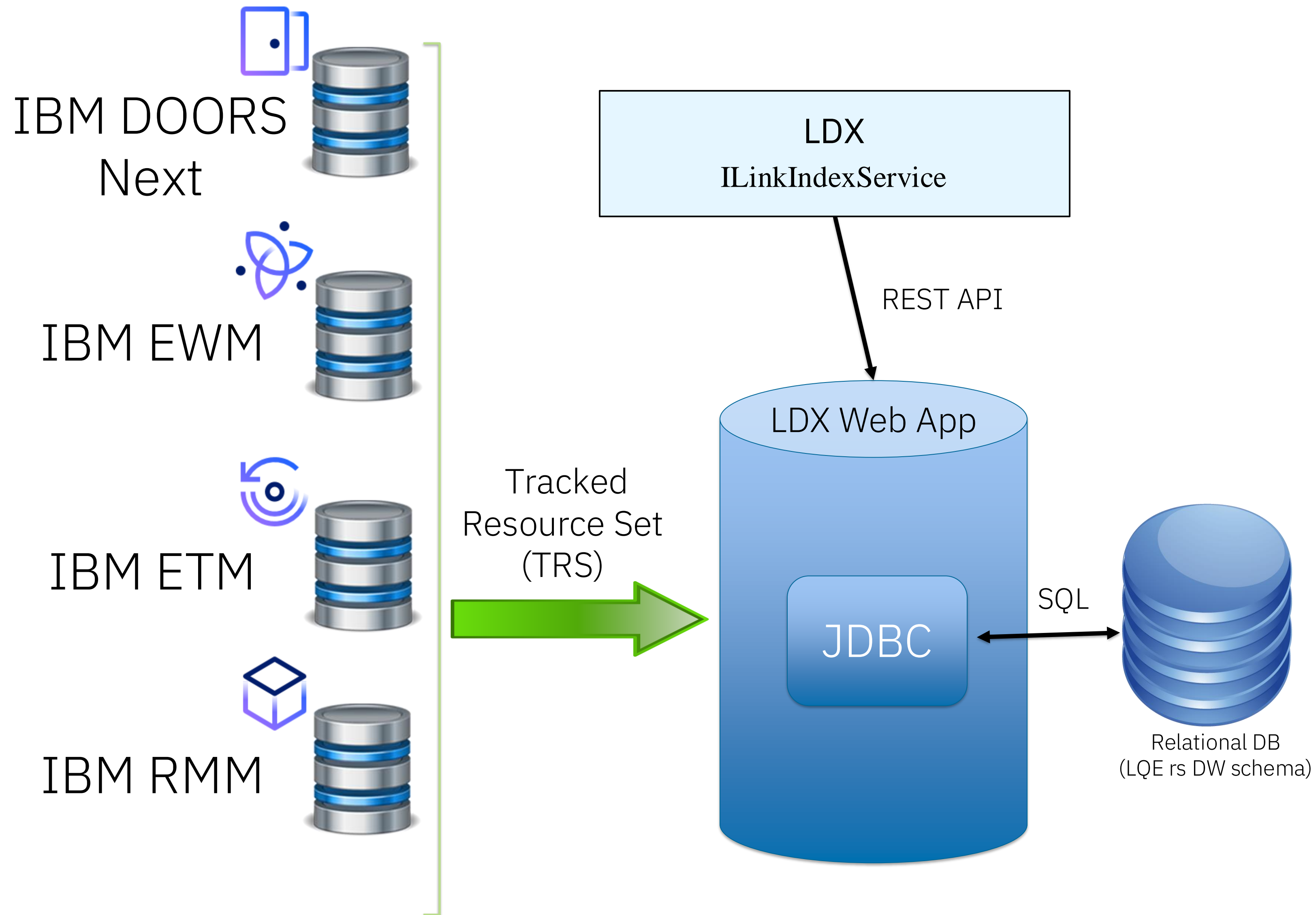
- LDX provides Java ILinkIndexService interface to ELM applications
- The interface utilizes a parameterized SPARQL query
 - Resources for which inbound links are needed for
 - Which inbound links are of interest
- Query is executed against the custom LQE at /ldx
- Customized LQE as /ldx web app
- Adjusted to store only link info from resources, as well as GC, LC for scoping details
- Setup to index a subset of ELM data providers
 - Only the ones that own the storage for links between 2 domains
 - If cross DN to DN server links are created, those DN TRS feeds added as data providers

LQE rs can service LDX and it is the default for 7.1 and recommended for nearly all customers



- LDX provides Java ILinkIndexService interface to ELM applications
- REST call to LQE rs with following:
 - Resources for which inbound links are needed for
 - Which inbound links are of interest
- Query is executed with JDBC against existing LQE rs DW

You can still run LDX separately from LQE rs as LDX rs



- LDX provides Java ILinkIndexService interface to ELM applications
- REST call to separate LDX rs web app with following:
 - Resources for which inbound links are needed for
 - Which inbound links are of interest
- LDX Web App - customized LQE rs setup as /ldx
- Adjusted to store only link info from resources, as well as GC, LC for scoping details
- Setup to index a subset of ELM data providers
 - Only the ones that own the storage for links between 2 domains
 - If cross DN to DN server links are created, those DN TRS feeds added as data providers
- Separate data warehouse instance

Automated the LQE server rename for LQE with relational store removes the need to reindex

- LQE server rename for LQE rs is now automated in Report Builder: **no need to reindex!**
- To rename the LQE server, all you need to do is generate and replace the mapping.txt file into the JTS LQE location and restart the Jazz Team Server.
- Previously, whenever the LQE server renaming process was triggered, you had to first unregister LQE from JTS, manually rename the server, and register the LQE again, and then reindex all data sources.

Configure the maximum size and age of query history

- You can use the following server properties in Report Builder to set the expiry of query history and report caching:
 - Maximum size of query history:** The maximum size of query history must be a value between 1000 and 1000000. If maximum age of query history value is nonzero, then the query history maximum size value is ignored.
 - Maximum age of query history in days:** The maximum age of query history must be a value between 0 and 365 days.
 - Cache report results per user:** If true, report results are cached for each individual user. The same report result is not shared by more than one user. Caching the report results per user can improve tracking of report data usage.

<u>Maximum size of query history</u> query.history.max.entries	10000	- +	10000	Dynamic
<u>Maximum age of query history in days</u> query.history.max.age	5	- +		Dynamic

Note: If both the maximum size of query history and maximum age of query history in days are set, then maximum age of query history in days takes precedence.

For more information, see [Report Builder configuration properties](#).

LQE provides additional notification events

- Additional events are added to the existing LQE notifications, **Compaction failures** and **Dataset suspension**. This helps the administrators monitor the health of the LQE servers and take corrective actions.
- To receive the notifications, the administrators can add recipients to the compaction and dataset suspension failures by enabling the notifications from <https://<server>/lqe/web/admin/notifications>.
- On compaction failure, an email about the failure is sent and the compaction schedule is disabled. They need to rectify the cause of failure and enable the compaction schedule.
- On data set suspension failure, an email is sent about the failure and the cause for the same.

IBM Engineering Lifecycle Query Engine



Lifecycle Query Engine - 7.1.0 M3 (LQE_7.1.0-I20231218-1134)

Jazz Team Server Home | Fariz Saracevic | Log Out

Home Health Monitoring Administration Query

Notifications

Lifecycle Query Engine can notify administrators of various events that help monitor the health of the system. For example, Lifecycle Query Engine generates an event if one of the data providers becomes unavailable. Configure email notifications by entering a list of recipients and selecting event types.

Recipients  

Event settings [Edit](#)

Click **Edit** to select the types of events.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Data provider events
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Backup events
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Load monitoring events
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Daily query performance events
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Disk usage events
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Validation events
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Permissions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Abnormal shutdowns
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rogue queries
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Automatic data provider corrections
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Compaction failures
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dataset suspension

Engineering Insights

Engineering Insights 7.1

User productivity

- ENI support for LQE rs
- Improved querying for string properties

Performance

- ENI view support using LQE rs performs generally better compared with LQE Jena



Engineering Insights (ENI) works with LQE relational store

ENI uses LQE rs to increase the overall scalability. ENI fetches the details of relational store if enabled, directly from LQE (no extra action required). If both relational store (rs) and Apache Jena triple store are enabled in LQE, ENI provides options to work with either of the query languages, SQL or SPARQL.

Create a view ✕

1 Specify a view name, where to save the view in, and details about the view. **2** **3**

Query language * SQL SPARQL

View name: *

Folder:



- My views
- Shared views

Create an empty view Create a view from an existing view

Existing view:

Style name:

Data source:

Configuration context: Use current configuration  

Example: Enter a view name. Use the default **My views** option to save the view as private; you can make it public later. Create an empty view.
If several data sources are registered with the Report Builder, select an appropriate data source. If you set the default Automatic option, the data source from the Configuration context field is used.

Create Custom Artifact Element using SQL as the query language

A new Custom Artifact Element (CAE) can be created by selecting SQL as the query language when LQE rs is enabled. For more information, see [Creating a custom artifact element using SQL query](#).



The screenshot shows a web interface titled "Custom artifact elements" with a search bar and a table of elements. The table has columns for Name, Actions, Description, Query language, Created by, and Last updated. Two elements are listed: "My CAE 1" with query language "SQL" and "My CAE 2" with query language "SPARQL".

<input type="checkbox"/>	Name	Actions	Description	Query language	Created by	Last updated
<input type="checkbox"/>	 My CAE 1			SQL	Rishikesh	Jun 24, 2024, 10:52:45 AM
<input type="checkbox"/>	 My CAE 2			SPARQL	Rishikesh	Jun 24, 2024, 10:53:10 AM


Create Impact analysis diagram using SQL as the query language


A new Impact analysis diagram can be created by selecting SQL as the query language when LQE rs is enabled. For more information, see [Creating impact analysis diagrams using SQL](#).

Impact analysis ✕

Query language: * SQL SPARQL

DataSource

Project scope: * No project area selected 

Artifact type * No artifact type selected 

Focus artifact: *

Profile *

Description:

This profile includes all downstream artifacts referenced from the focus artifact, to a depth of 1.

Impact analysis conditions:


Active conditions are not set. You can set them later in the Active conditions tab.


Improved querying for string properties

- String queries in ENI now make use of improvements introduced in Report Builder 7.0.3. This change provides a consistent and documented design for querying string properties in both applications.
- The following are the images that display warnings related to the validation of string values:

Acceptance Description contains ▾


No set value


\a 

 The escape sequence \a is not valid. Valid escape sequences are \t, \n, \', \", and \\.

Acceptance Description contains ▾


No set value

\ 

 Missing character after \.

Acceptance Description contains ▾

No set value


"a 

 Unmatched double quote.

Acceptance Description contains ▾

No set value

'a 

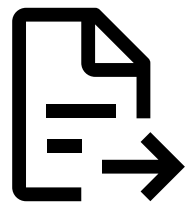
 Unmatched single quote.

Publishing

Engineering Publishing 7.1

User productivity

- Preserve the original image quality when generating PDF in PUB
- Publishing honors domain application vertical alignment in table cells
- Folder action permissions ensure no unauthorized changes



Preserve the original image quality when generating PDF in PUB

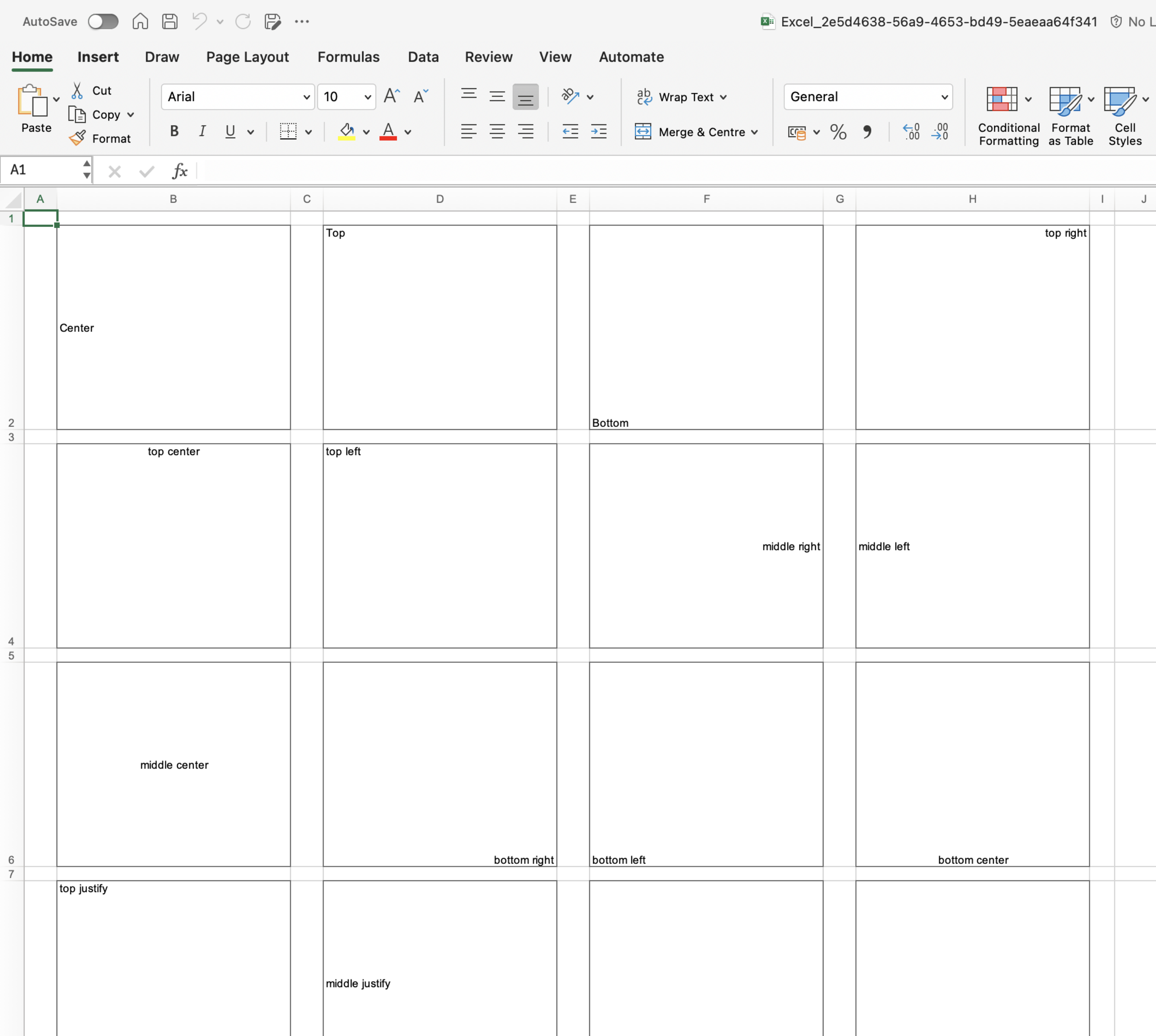
- PUB allows users to preserve the original image quality from the source document when generating a PDF. Previously, you might select from the following image quality in pixel per inch (ppi) for your PDF format report: Low (140 ppi), Medium (220 ppi), and High (300 ppi). However, if the original image quality was higher than the listed image sizes and you zoom the image in the PDF, the image in the PDF gets blurred.
- With the **Keep as original** image quality option, the image quality in the generated PDF report is the same as the source document. On the Resources page in Publishing Document Builder, go to the Reports tab and click Edit Report. In the Report output format section, select PDF and click **Update and configure**. In the Configure report window, go to **Outputs** tab, and specify Image Quality (ppi) as **Keep as original**.

Publishing honors domain application vertical alignment in table cells

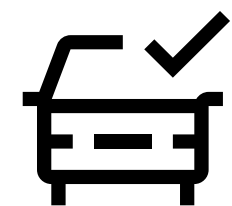
Engineering Publishing honors vertical alignment of the table cells that are passed by IBM® DOORS® Next or Engineering Test Management.

Previously, the template designers were not able to use configured vertical alignment of table cells.

The following is an image displaying a PDF output with the various vertical alignment options:



ELM Automotive Compliance 1.1



ASPICE 4.0

- New process group: VAL.1 Validation has been introduced
 - New test plan artifact category: Validation strategy
 - JRS Report for traceability (coverage, correctness, and gap)
 - MEC: Process guidance
- Updates to Automotive Compliance MEC process as per as per new terminology guidelines provided by ASPICE 4.0.
- Removed support and guidance for the following process groups:
 - ACQ 12
 - SUP.2

ASPICE for Cybersecurity

- Updates for process group SEC.3 Risk treatment verification and SEC 4. Risk treatment validation
 - New test plan artifact category
 - JRS Report for traceability (coverage, correctness, and gap)
- Updates to MEC: Process for:
 - New guidance and standard mapping for SEC.1, SEC.2, SEC.3, SEC.4, and MAN.7 process groups
 - Updates for MAN.7 and adjacencies to TARA process

ISO 21424 for Cybersecurity

- Updates for Threat Analysis and Risk Assessment (TARA)
 - Extend TARA calculator to provide of additional calculations like attack vector, risk value etc.
 - Updated information model of DOORS Next template
 - Updated JRS Report for traceability: Cybersecurity goals, risk treatment validation specification, and validation results
- New calculator to determine value of CAL of cybersecurity goals

Other Updates

- Updates related to SAFe 6.0 terminology and support
 - Updates to Automotive Compliance process to reflect terminology changes in SAFe 6.0
 - Minor updates to EWM and DOORS Next template for Portfolio Management with guidance on how to use SAFe 6.0 template for creating project Lean Portfolio Management (LPM) based on SAFe 6.0.
 - Updates to names and descriptions of all existing JRS reports to reflect SAFe terminology updates
- Use of folders to package existing and new JRS reports and discontinue use of tags as primary mechanism for organization.

Thank you

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