



HIGHLIGHTS IN PURE VARIANTS

Release 7.1



Date: 2025-08-14

PURE VARIANTS RELEASE 7.1

Pure Variants 7.1 is a feature release, which brings a number of notable feature additions and improvements, as well as important bug fixes

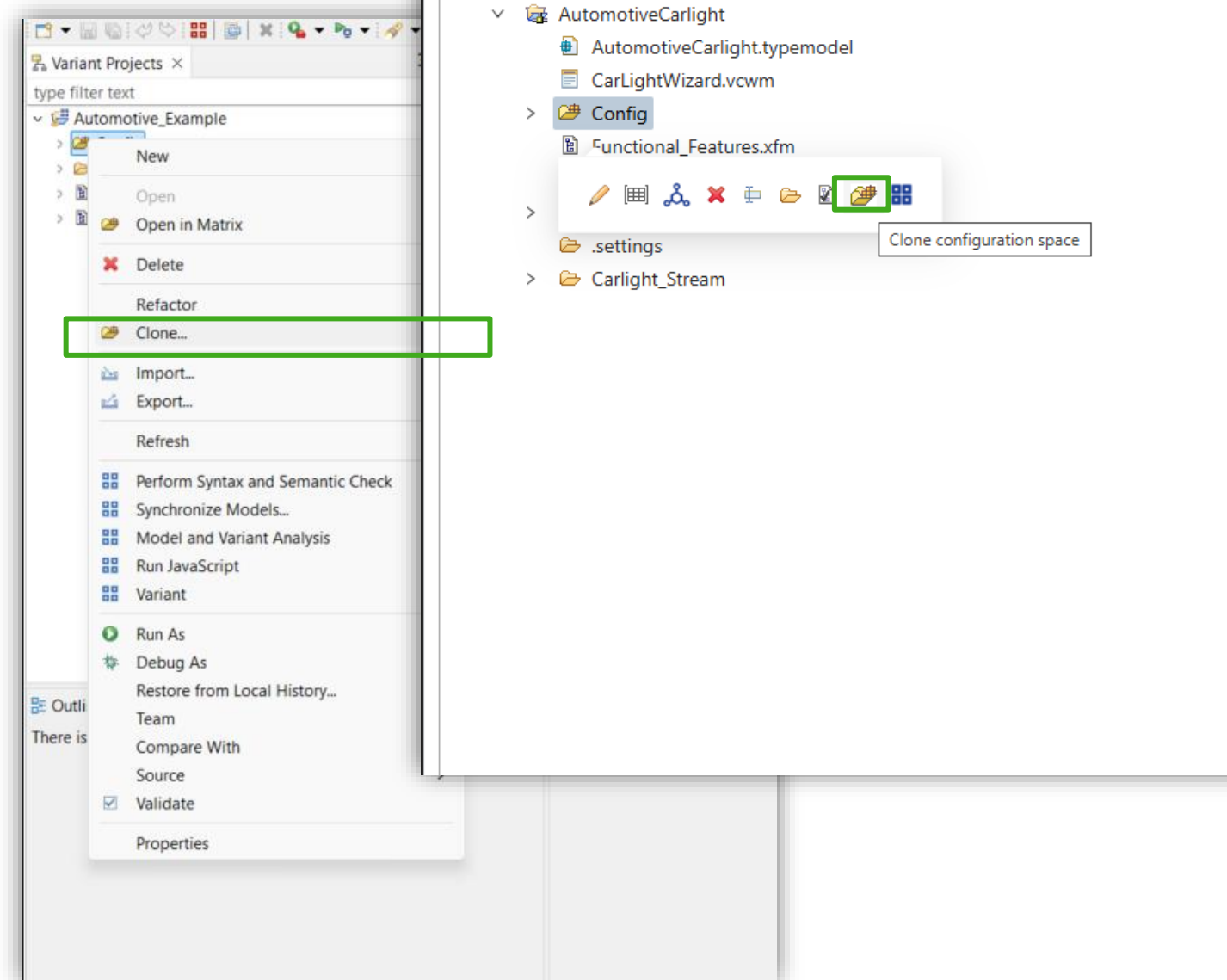
- **Scalability and Enhanced User Experience** – faster creation of configuration spaces, improved model server caching, option to disable full mode (desktop), custom input model order, improved rename/refactoring handling and various bug fixes.
- **Seamless Experience (ALM) Codebeamer** - now supports streams, provides an overview of reused tracker items, enhanced preview, simplified SSO deployment and easier user/group synchronization.
- **Openness to Connectors** - includes syntax & semantic checks in Jama, faster Rhapsody Model Manager transformations, license usage export, configuration space folder structure visibility, Microsoft error handling fixes and more.
- **Benefit from the most Recent Tool Versions** - compatibility with newer versions of Codebeamer, Capella, Enterprise Architect, IBM ELM, IBM Rhapsody and Eclipse



SCALABILITY AND USER EXPERIENCE DESKTOP AND WEB CLIENT

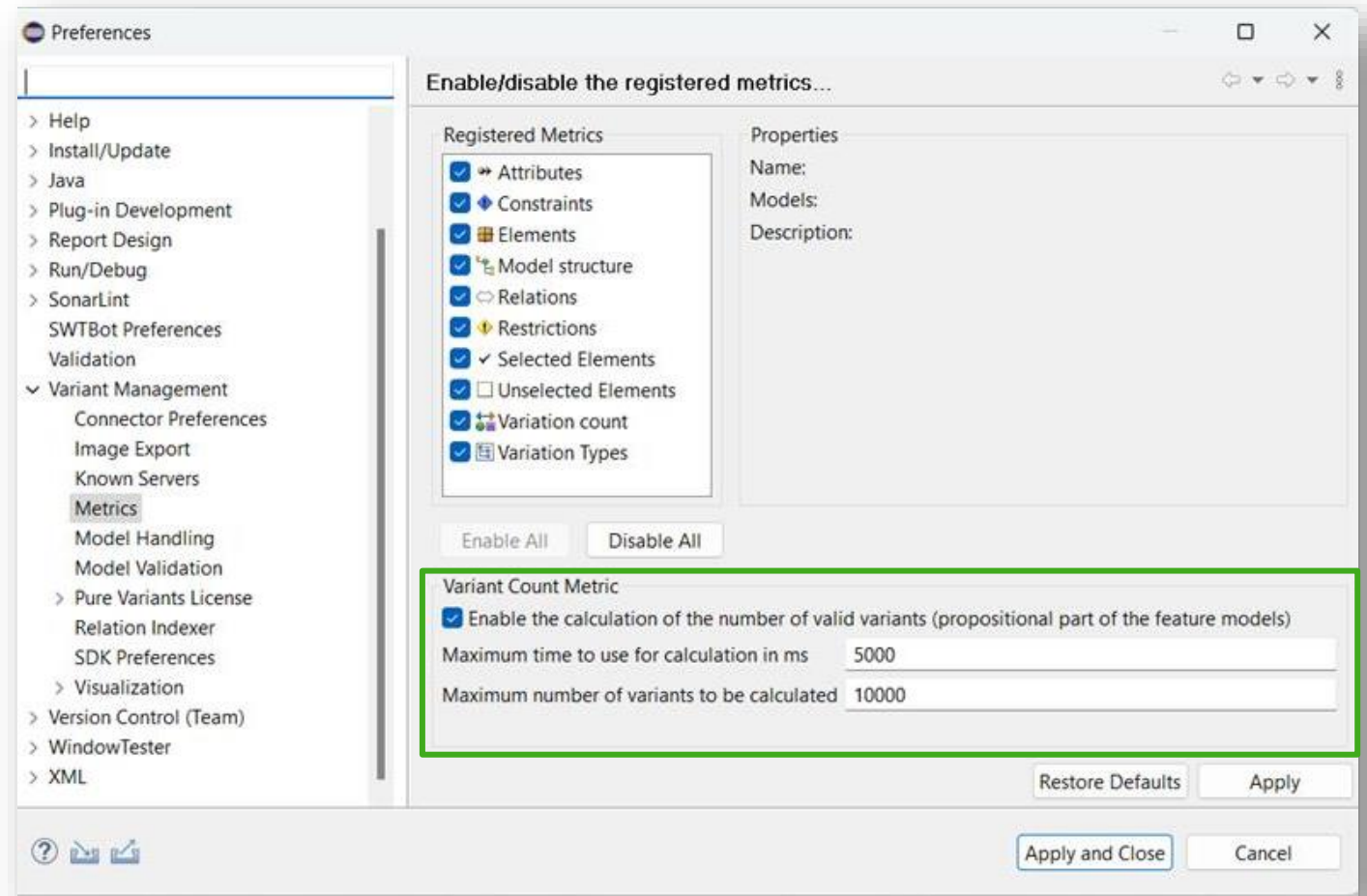
CLONE CONFIGURATION SPACES

- Added capability to clone configuration spaces to **Desktop Client** and **Web Client (PV-4013)**
- Take over all settings of an existing configuration space, including transformation settings to a new configuration space in the same project or in a different one
- Faster and less error-prone setup of new configuration spaces
- Prepare configuration space templates and reuse across application projects



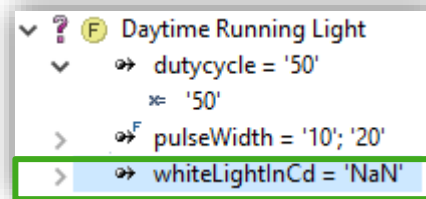
SHOW NUMBER OF POSSIBLE VARIANT CONFIGURATIONS

- Based on the feature models of a configuration space, display the number of possible variants with different feature selections in the **Desktop Client (PV-7418)**
- Help users to understand the impact of modeled relations, restrictions and constraints on the number of possible variants.
- Help users to understand the impact of selections and exclusions in intermediate variants on the number of possible variants
- Support initiatives to keep the number of possible variants low.



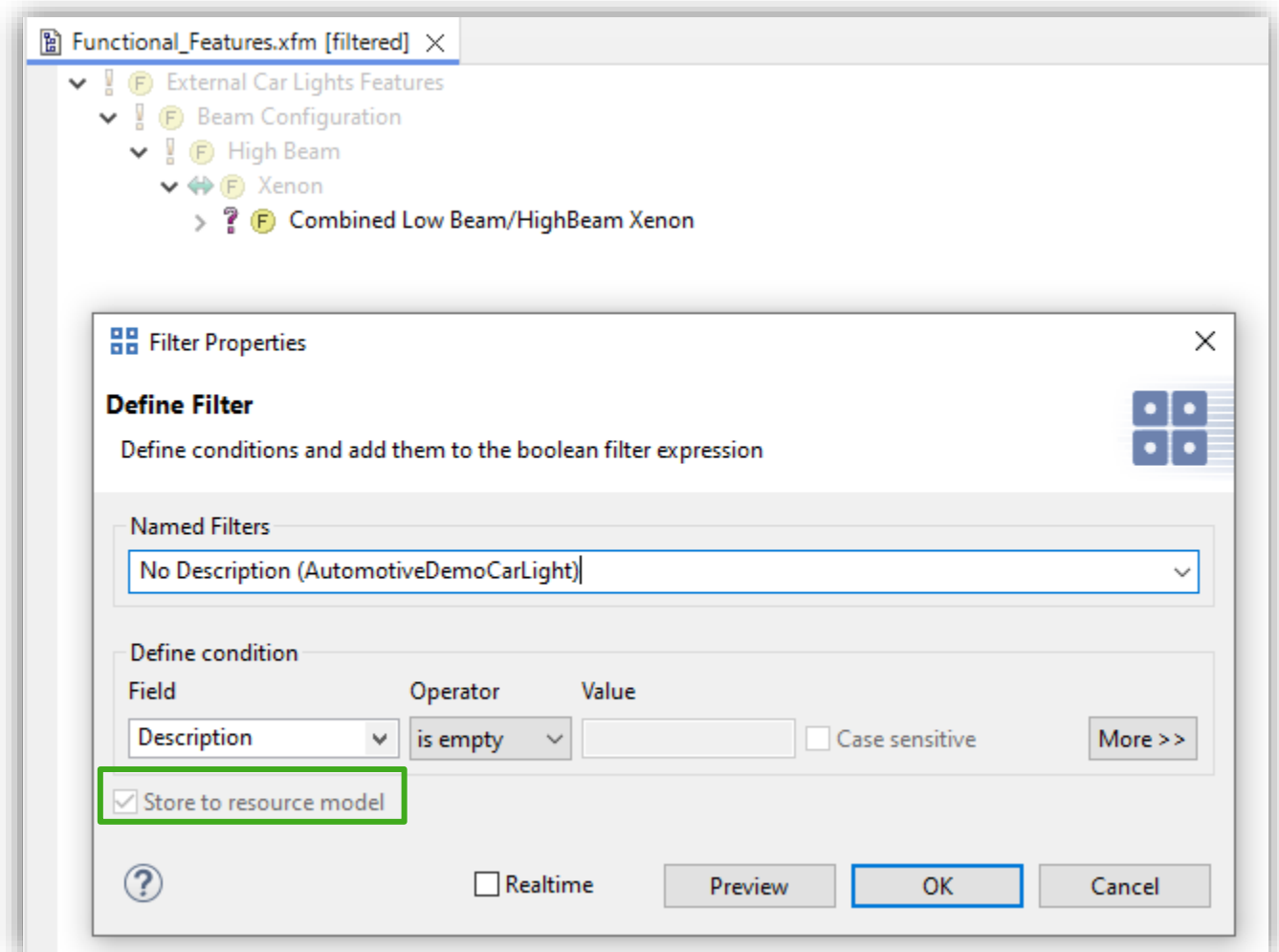
SUPPORT NUMBER CONSTANT VALUES NAN, +INF, -INF

- Added support for the constants NaN (not a number) +Inf (positive infinity) and -Inf (negative infinity) to **numerical attribute types** in Pure Variants **(PV-6309)**
- Users can now set the value of ps:integer and ps:float attributes to NaN, +Inf or -Inf.
- Limitation: Arithmetic operations with operands NaN, +Inf or -Inf are currently not supported.



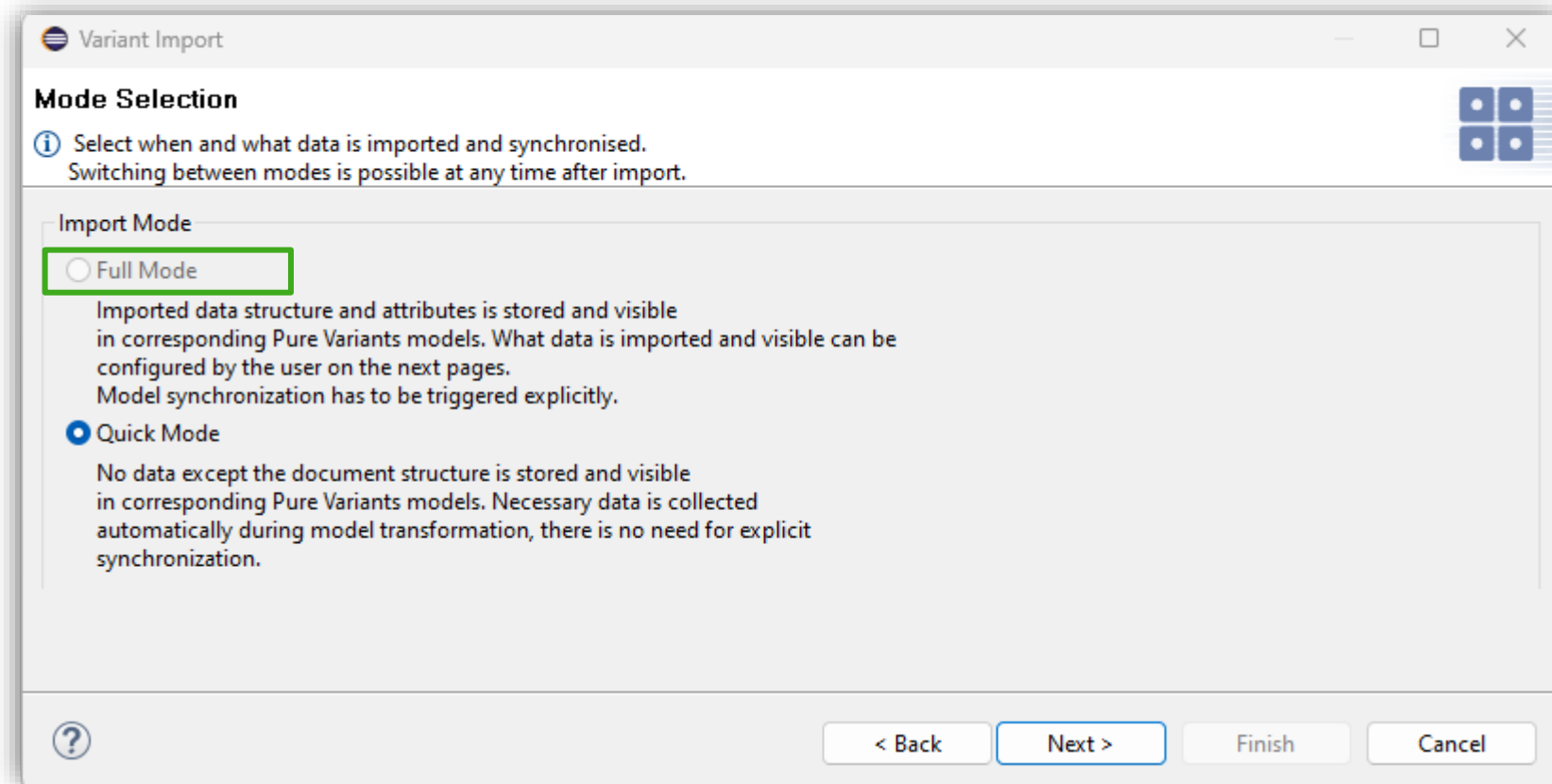
SHARE FILTERS IN PURE VARIANTS PROJECTS

- Support storing filters to Pure Variants projects (file-based and model server) **(PV-7785)**
- Users can now save and share their filters for a project via **Desktop Client**.
- Users can now load and apply their own and shared saved filters of other users in the Desktop Client.



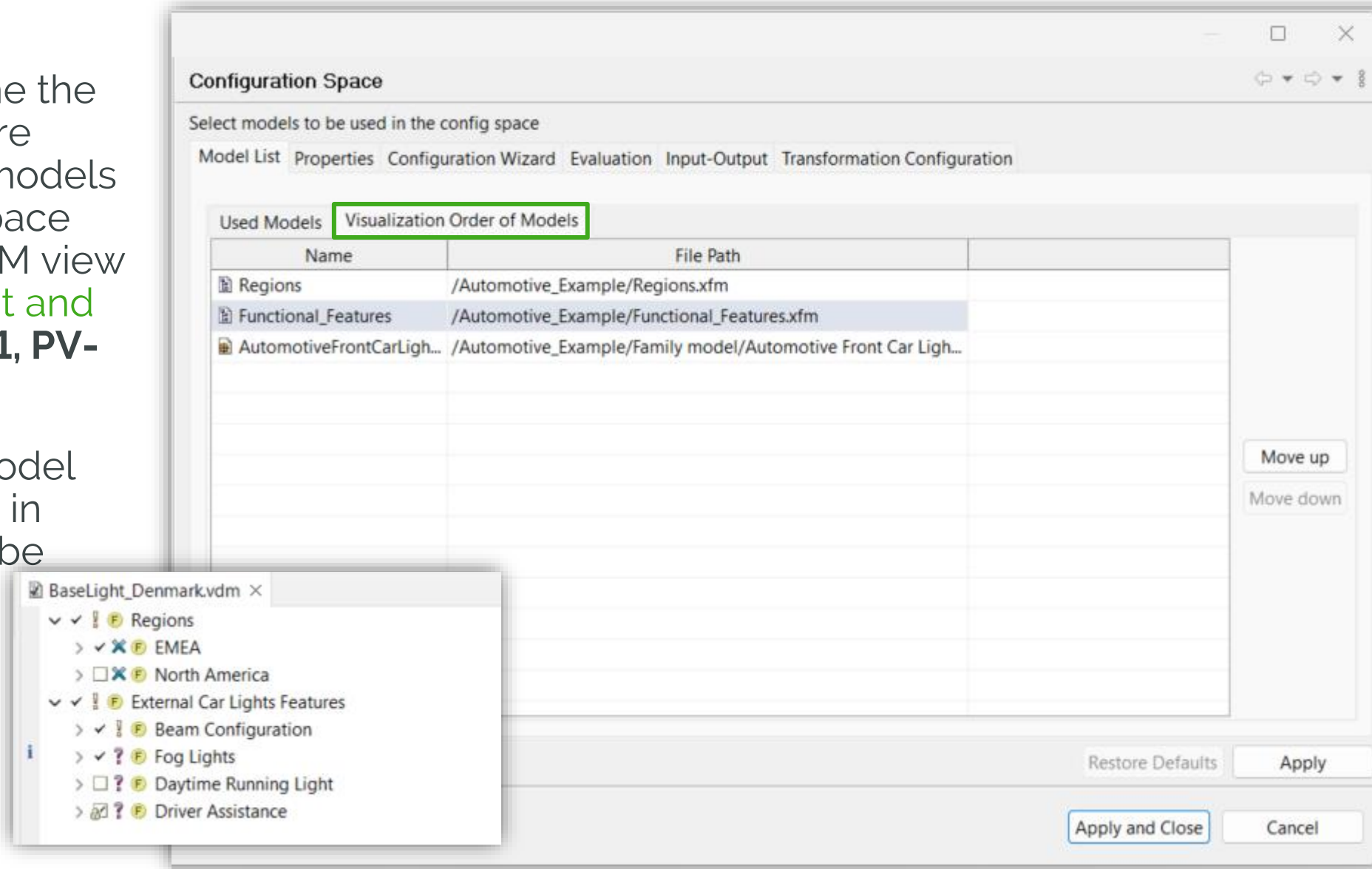
SETTING TO DISABLE FULL MODE FOR FAMILY MODELS

- Added a configuration option to disable full mode for the initial import and the synchronization of family models in the **Desktop Client** (full mode is enabled by default) **(PV-7756)**
- Prevent users from accidentally exposing data of requirements, test cases and other engineering assets to Pure Variants within confidential environments.



CUSTOM VISUALIZATION ORDER OF INPUT MODELS IN VDM

- Users can now define the order in which feature models and family models of a configuration space are shown in the VDM view of the **Desktop Client and Web Client (PV-7741, PV-2783)**
- Users can set the model order to fit the order in which variants shall be configured



PERFORMANCE IMPROVEMENTS

- Improved performance of opening models and evaluations in Matrix Editor of **Desktop Client** **(PV-7737)**
- Faster model loading in **Desktop Client** due to resolving of references in pvscl expressions in the background **(PV-7938)**
- Faster access to frequently used Model Information due to improved caching on **Model Server** side **(PV-7919)**
- Improved transformation performance for Quick mode imports **(PV-3934)**

MORE IMPROVEMENTS AND FIXES

- Resolved an issue where renaming instances caused auto selections to persist in variant models **(PV-6467)**
- Fixed rename project and refactoring actions with type, vcwm models and resource models including references to pvSCL functions **(PV-7676, PV-7677, PV-7680)**
- Users can now copy the unique ID of an item (elements, relations, restrictions, properties, values, and constraints) **(PV-7685)**

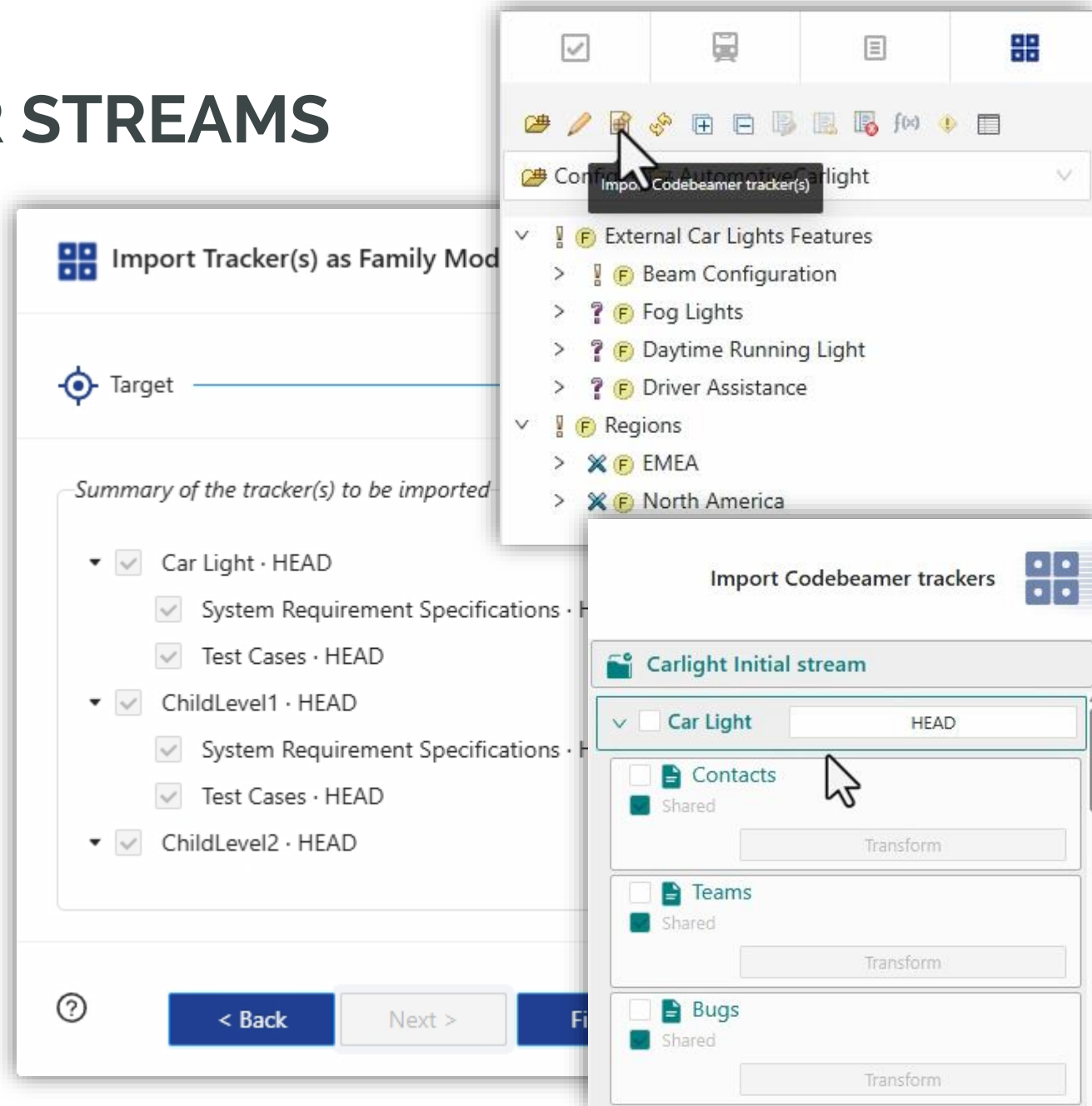


SEAMLESS EXPERIENCE (ALM)

CODEBEAMER

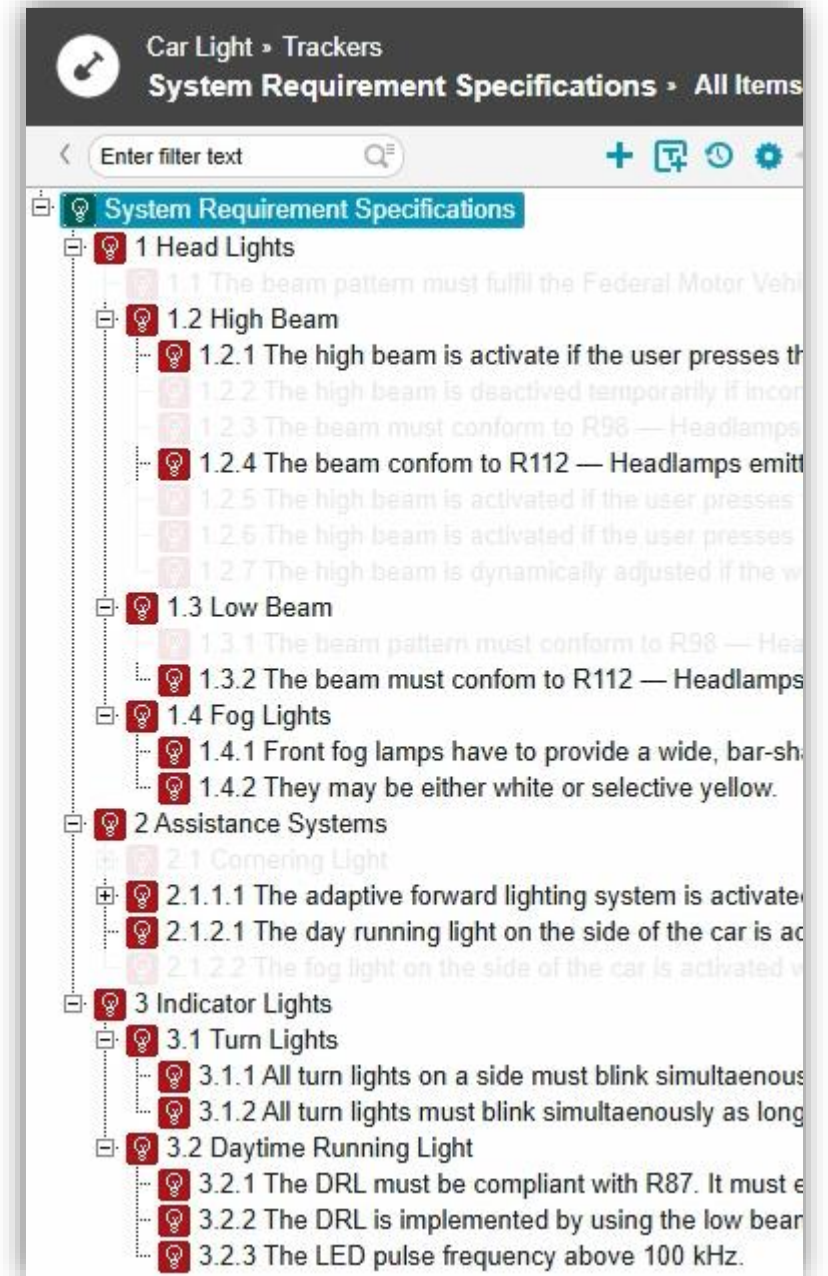
SUPPORT FOR CODEBEAMER STREAMS

- **Pure Variants** supports importing family models from streams (introduced with **Codebeamer 3.1**) and generating variant-specific streams from superset streams. **(PV-7380)**
- Structure your superset Codebeamer assets across multiple projects to better reflect your system breakdown structure.
- Keep links between Codebeamer assets of different projects intact when generating variant-specific Codebeamer assets.
- Make use of link propagation across Codebeamer project borders.



IMPROVED PREVIEW CAPABILITIES

- The Preview capability of the **Connector for Codebeamer** now extends to the tree view of trackers. **(PV-6375)**
- Users get a better overview on the tracker items that will (not) be part of the currently previewed variant.



SIMPLIFIED DEPLOYMENT FOR SSO WITH CODEBEAMER

- New Single Sign On option between **Pure Variants** and **Codebeamer (PV-4398)**
 - Direct OAuth 2.0-based authorization flow between the tools
 - Support for multiple parallel login methods of Codebeamer
 - Reduced deployment complexity
- OIDC-based authorization with confidential client (nginx proxy) is still available and supported.

CODEBEAMER USER & GROUP SYNC TO PURE VARIANTS

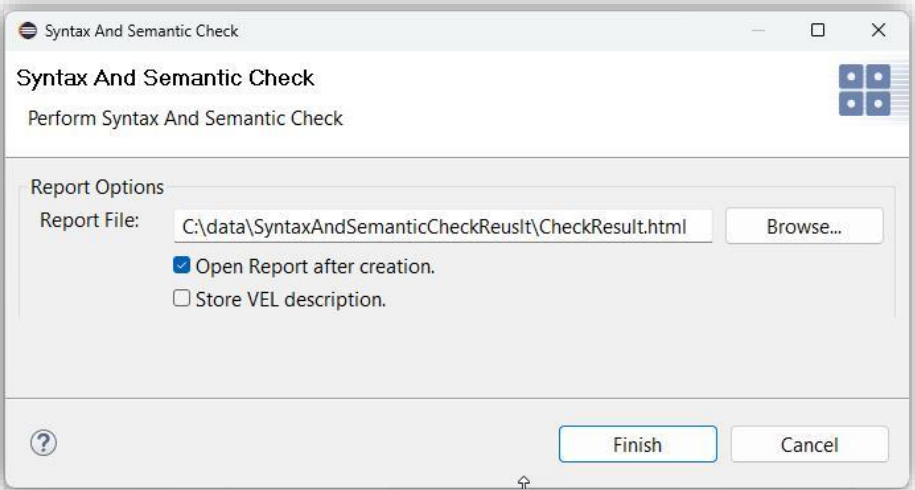
- Import and update users and groups in **Pure Variants** with **Codebeamer** as data source **(PV-6645)**
- Support user and group synchronization scenarios in which Codebeamer users and / or groups are not only received from LDAP / Active Directory but defined directly via the Codebeamer access rights and user management
- Simplify rollout of Pure Variants in environments with an existing Codebeamer deployment



OPENNESS TO CONNECTORS THIRD-PARTY TOOLS

SYNTAX AND SEMANTIC CHECK REPORT FOR JAMA

- The syntax and semantic check report for restrictions and calculations in **Jama Connect** is now available in the **Desktop Client**. It ensures efficient validation across all items in and across projects. Easily navigate to incorrect expressions through links. **(PV-7093)**



Syntax and semantic check dialog

A screenshot of the 'Syntax and Semantic Check Result' report. The title is 'Syntax and Semantic Check Result'. Below the title, it says 'Generated on Tue Jul 08 12:21:31 CEST 2025 with Pure Variants 7.1.0'. There are two main sections: 'PVSCL Problems' and 'Evaluation Problems'. The 'PVSCL Problems' section has a sub-header 'Model Automotive Front Car Light Product Line' and a table with columns 'Severity', 'Message', 'Element', and 'Attribute'. It contains two rows, both with 'Warning' severity and the message 'Identifier 'FogLights' is unresolvable in 'FogLights''. The first row has 'Item_7841' as the element and 'pvRestriction' as the attribute. The second row has 'Item_7876' as the element and 'pvRestriction' as the attribute. A hand cursor is pointing at the 'Item_7876' link. The 'Evaluation Problems' section has a sub-header 'Variant Model: BaseLight_Denmark' and a table with columns 'Severity', 'Message', 'Model', and 'Element'. It contains one row with 'Info' severity and the message 'use default value for attribute 'BindingTime' of element 'Fog Lights''. The 'Model' is 'Functional_Features' and the 'Element' is 'Fog Lights'.

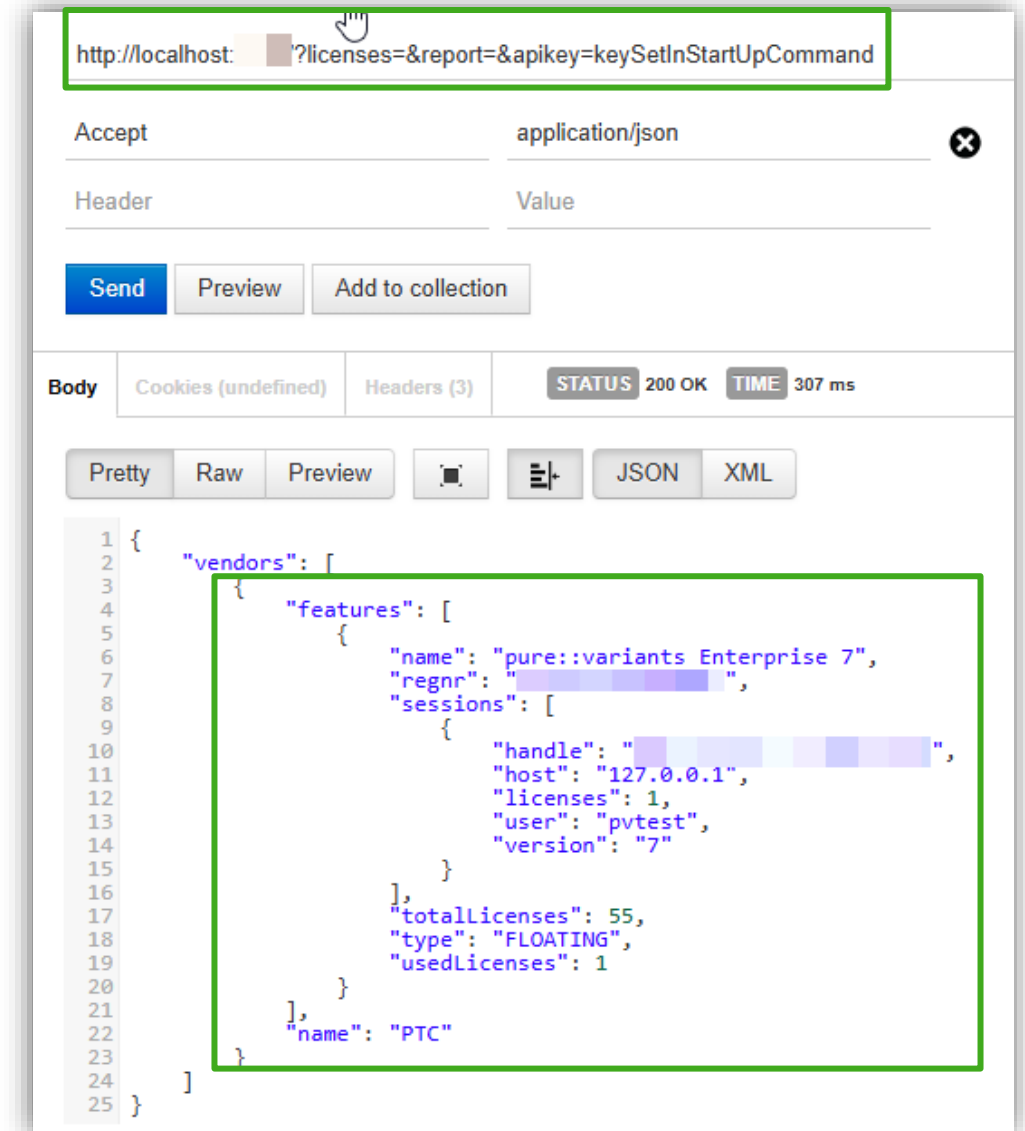
Jama syntax and semantic check report

FASTER RHAPSODY MODEL MANAGER TRANSFORMATIONS

- More performant check in and delivery of change sets to [Rhapsody Model Manager Streams](#) **(PV-7847)**
- Rhapsody enumeration transformations are **up to 84% faster***
- Rhapsody Stream transformations are **up to 76% faster***

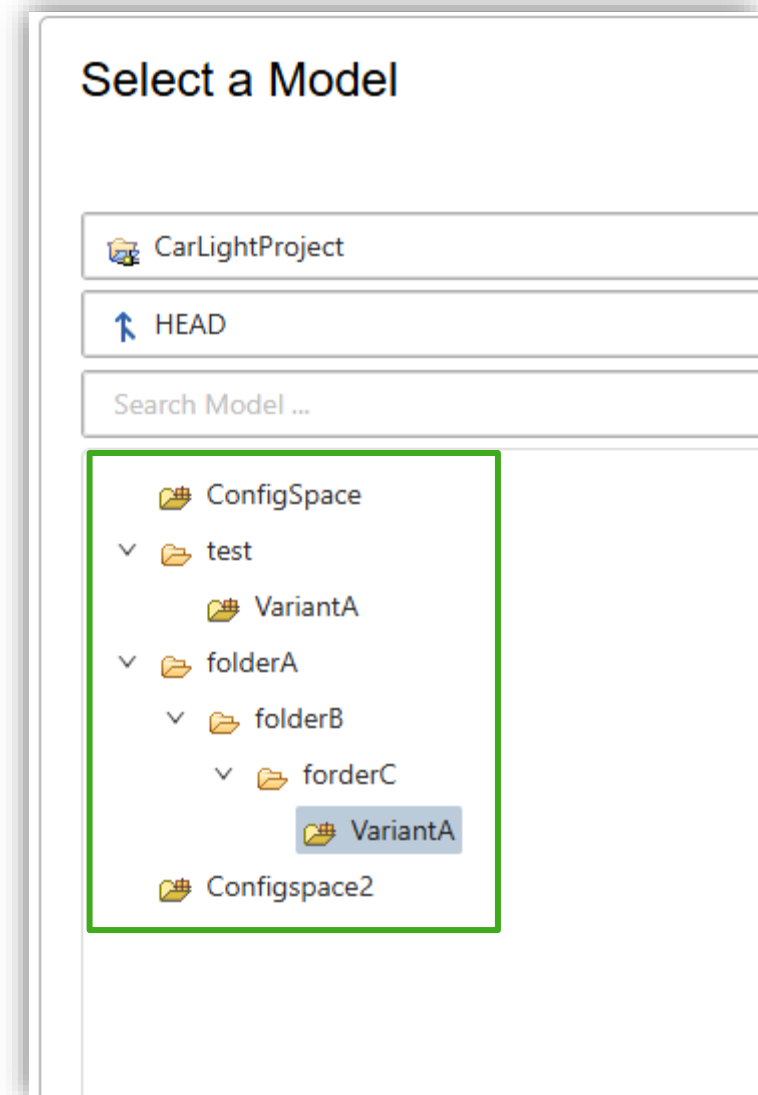
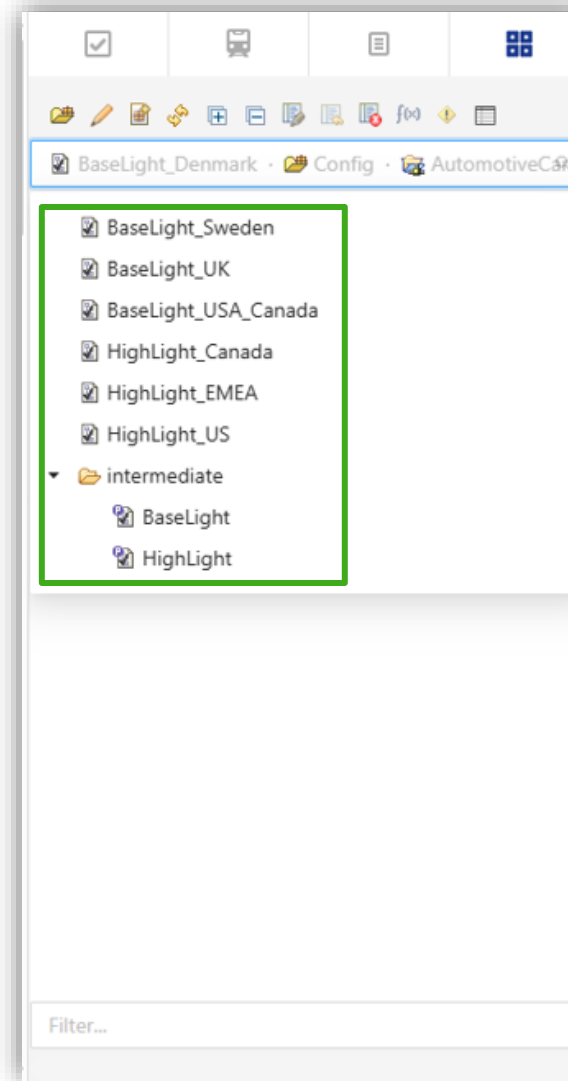
EXPORT LICENSE USAGE INFORMATION

- Added a REST API to export license usage information in JSON format from the Pure Variants **License Server (PV-7780)**
- License usage information can be forwarded to 3rd party tools for analyzing and reporting purposes



SHOW FOLDER STRUCTURE OF CONFIGURATION SPACES

- The Pure Variants in-tool integrations for **Codebeamer**, **DOORS Next** and **Polarion (PV-7133)** and the selection dialogues of the **Web Client Model Picker (PV-6472)** now display the full folder structure of Pure Variants projects, including folders in configuration spaces.
- Configuration Spaces in folders of projects can be distinguished and located more quickly
- VDMs in sub-folders of configuration spaces can be distinguished and located more quickly



MORE IMPROVEMENTS AND FIXES

- Improved editing experience for conditions and calculations in **Office 365 (PV-7230)**
- **Jama** test steps now supports partial text substitution **(PV-7957)**
- Modifying a restriction in **IBM Doors Next** causes add/remove changes during sync. Fixed. **(PV-2636)**
- Resolved issue where **Microsoft Word** transformation failed silently due to invalid characters in pvSCL rules **(PV-7252)**
- Error check in **Microsoft Excel** integration now handles multi-character substitution markers **(PV-7385)**



VERSION UPDATES

TOOL VERSION UPDATES

The following new versions of PTC / 3rd party tools and infrastructure software have been verified to work with Pure Variants 7.1*.

- Capella 7.0.1
- Codebeamer 3.1
- Eclipse 2025-03, 2025-06
- Enterprise Architect 17.1
- IBM ELM 7.1.0 (iFix 001, iFix002)
- IBM ELM 7.0.2 (iFix032, iFix033)
- IBM ELM 7.0.3 (iFix009, iFix013)
- IBM Engineering Rhapsody 10.0.1 - iFix002
- IBM Engineering Rhapsody 10.0.2

* For details on all supported versions in the current release, check the [Systems Requirements document](#)



THANK YOU

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