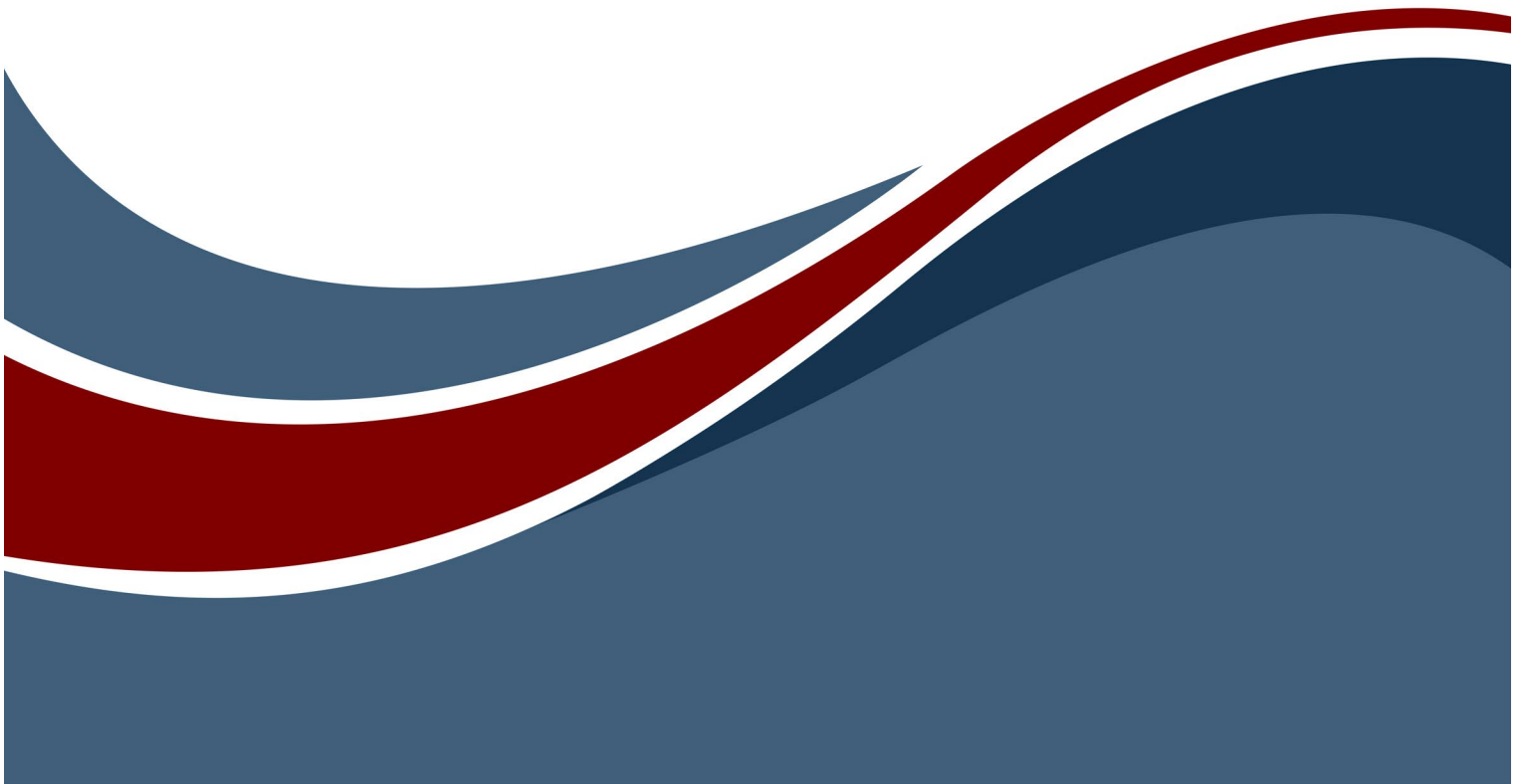




What's New in GENESYS 2026



What's New in GENESYS 2026

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CUSTOMER RESOURCE OPTIONS

Supporting users throughout their entire journey of learning model-based systems engineering (MBSE) is central to Vitech's mission. For users looking for additional resources outside of this document, please refer to the links below. Alternatively, all links may be found at www.vitechcorp.com/online-resources/.



[Webinars](#)

Immense, on-demand library of webinar recordings, including systems engineering industry and tool-specific content.



[Screencasts](#)

Short videos to guide users through installation and usage of GENESYS.



[A Primer for Model-Based Systems Engineering](#)

Our free eBook and our most popular resource for new and experienced practitioners alike.



[Help Files](#)

Searchable online access to GENESYS help files.



[Technical Papers](#)

Library of technical and white papers for download, authored by Vitech systems engineers.



[Technical Support](#)

Frequently Asked Questions (FAQ), support-ticket web form, and information regarding email, phone, and chat support options.

What's New in GENESYS 2026

GENESYS 2026 delivers a major leap forward for MBSE with substantial performance improvements, an upgraded DevExpress v24 reporting framework, and enhancements across diagrams, schema management, auditing, and the user interface. This release streamlines modeling workflows, improves clarity and responsiveness, and makes GENESYS more powerful and intuitive than ever.

SUMMARY OF GENESYS 2026 CHANGES

- Significant Performance Improvements
- Upgrade of the reporting framework to the latest version of DevExpress (v24)
- Upgrades and enhancements to many diagram types
- Hide attributes in the project schema.
- Audit Log updates
- Property Sheet Header includes entity class name
- Windows title bar contains project name

PERFORMANCE IMPROVEMENTS

GENESYS 2026 delivers step-change performance improvements across diagram loading, cross-project navigation, project open, report generation, TeamView, diagram UI responsiveness, and many other common user operations, making project open and common operations much faster.

Diagram Load

Diagram load times have been significantly reduced when opening a diagram for the first time. This was accomplished by reducing chattiness between client and service during the load process. Logic was added to pre-cache relevant model data prior to building the diagram. Improved diagram rendering also heavily contributed to reducing load times. As the diagram size and connection latency increases, the net gains increase substantially. In tests performed, large diagrams open almost 100x faster.

Cross-Project Relationships

Cross-Project Relationships are relationships that exist between entities in separate GENESYS projects. Performance related to cross-project relationships has been significantly improved. This includes loading times on diagrams and general navigation (e.g., selecting an entity to open the property sheet in the project explorer) wherever cross-project relationships are represented. In a client-server configuration, cross-project diagram load times are now 116x to 224x faster. In a client-local service configuration, cross project diagram load times are now 2.8x to 4.4x faster.

Project Open

Project open times have been improved in different scenarios. The biggest gains are realized in scenarios where the client is connected to the local service where compression is now being leveraged. For larger projects, the gains are significant. When connected to a remote service over a WAN, the project load time has been increased (compression was already enabled for remote clients). In this scenario, more data is now pre-cached. This was needed to improve general navigation of these larger models after project open where entity inheritance is in play (those using *generalization of / kind of* relationships). In a client-server configuration, there is a 1.1x to 1.5x improvement. For a local client configuration, project open times are 1.7x to 2.0x faster. For models not heavily using inheritance, there is little to no change.

Report Generation

The DevExpress reporting framework used by GENESYS has been upgraded from v16 to v24. This is a significant upgrade that introduces new capability by DevExpress, corrects existing customer defects, improves performance, and reduces the output file sizes. Report generation times have improved 3x to 5x. Also, .docx is now supported as a native output format.

TeamView Generation Time

Reduction in diagram load times heavily contributes to reducing the TeamView generation time.

Other Performance Improvements

- **Diagram UI Responsiveness:** Significantly increased responsiveness in panning and zooming across all diagrams due to improved diagram rendering. For example, moving a node in a large Flow IBD with ports enabled previously froze for an extended period post-drop (>2m in extreme cases). This has been addressed and now, regardless of the number of nodes selected for the move, takes ~3-5s to perform the edge routing.
- **Asynchronous Folder Retrieval:** Entity folder retrieval while navigating the UI is now performed asynchronously, leaving the UI responsive so the user can continue to work on their project. Allows the user to fetch multiple folders at the same time if desired without the UI hanging indefinitely.
- **Bulk Relationship Creation:** Creating a large set of relationships simultaneously has improved 2x to 2.4x (for the test case of 1,0000 *built from* relationships generated in a large model).
- **Bulk Move of Entities:** Moving a large group of entities from one folder to another now is up to 1.4x faster.
- **Bulk Delete of Entities:** Bulk deletion of a large group of entities is now up to 2.2x faster.
- **Improved Typing Responsiveness in Description Fields:** Significantly reduced the latency between keystrokes and text appearing in description fields on entity property sheets, resulting in a smoother and more responsive experience.
- **Admin Tools – Users Panel Improvements:** Significantly increased responsiveness while scrolling through and navigating the Users Panel.

UPGRADE OF THE REPORTING FRAMEWORK

The DevExpress reporting framework used by GENESYS has been upgraded from v16 to v24. This is a significant upgrade that introduces new capability by DevExpress, corrects existing customer defects, improves performance, and reduces the output file sizes. DOCX is now supported as an output format. Please review the included “Introduction to Writing Reports” document for instructions on migrating reports from previous versions of GENESYS as some adjustments are necessary for previous reports to render correctly. All GENESYS 2026 reports included have been updated.

DIAGRAM UPGRADES AND ENHANCEMENTS

GENESYS 2026 introduces a wide range of diagram enhancements that give users far more control, flexibility, and precision in how their models are visualized and manipulated. From relaxed layout constraints and new free-form behaviors to richer formatting and routing options, diagrams are now easier to shape exactly the way you want.

Relaxed Constraints on Hierarchical Diagrams

Constraints on hierarchical diagrams (e.g., Hierarchy, BDD, Constraint BDD, Requirements) have been relaxed. The diagrams can be manipulated in a free-form manner similar to the spider diagram. Different layout types can be applied. Users now have more control over layout including the ability to specify the spacing between nodes.

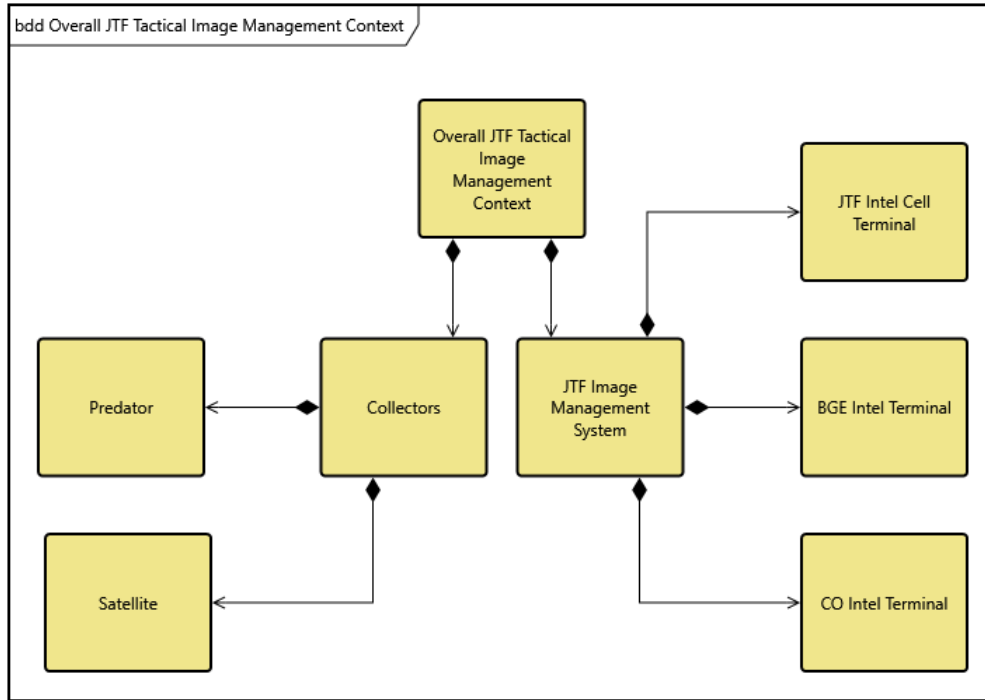


Figure 1: Example of Relaxed Constraints on a Hierarchical Diagram. Entities can be placed anywhere.

New “Org Chart” Layout for Free-Form Diagrams

A new “Org Chart” layout type has been added to all free-form diagrams. This layout format organizes all second-level entities horizontally. All third-level entities (and beyond) are nested underneath vertically. This structure has the advantage of being more compact than the previous default layout.

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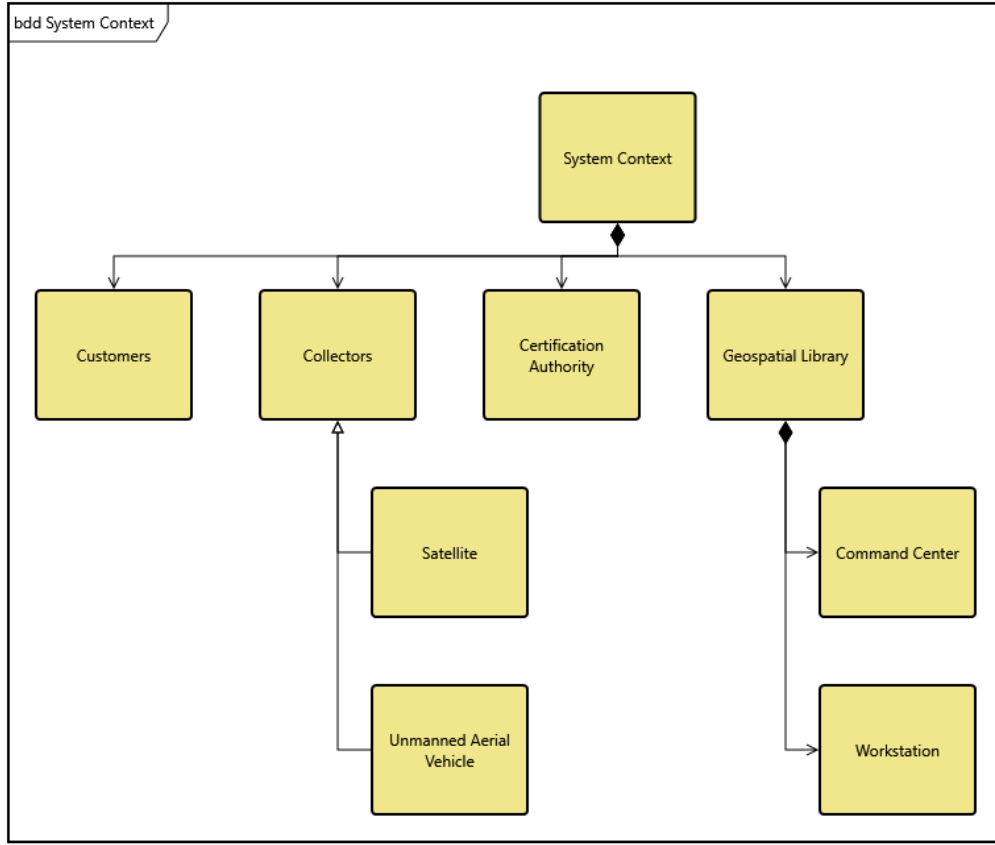


Figure 2: Example of the *Org Chart* layout applied to a BDD

FFBD/EFBD/Activity Diagram Enhancements

Data flow lines on the FFBD/EFBD/Activity can now be selected and manipulated. The routing can now be fully controlled by the user, including the application of orthogonal line routing.

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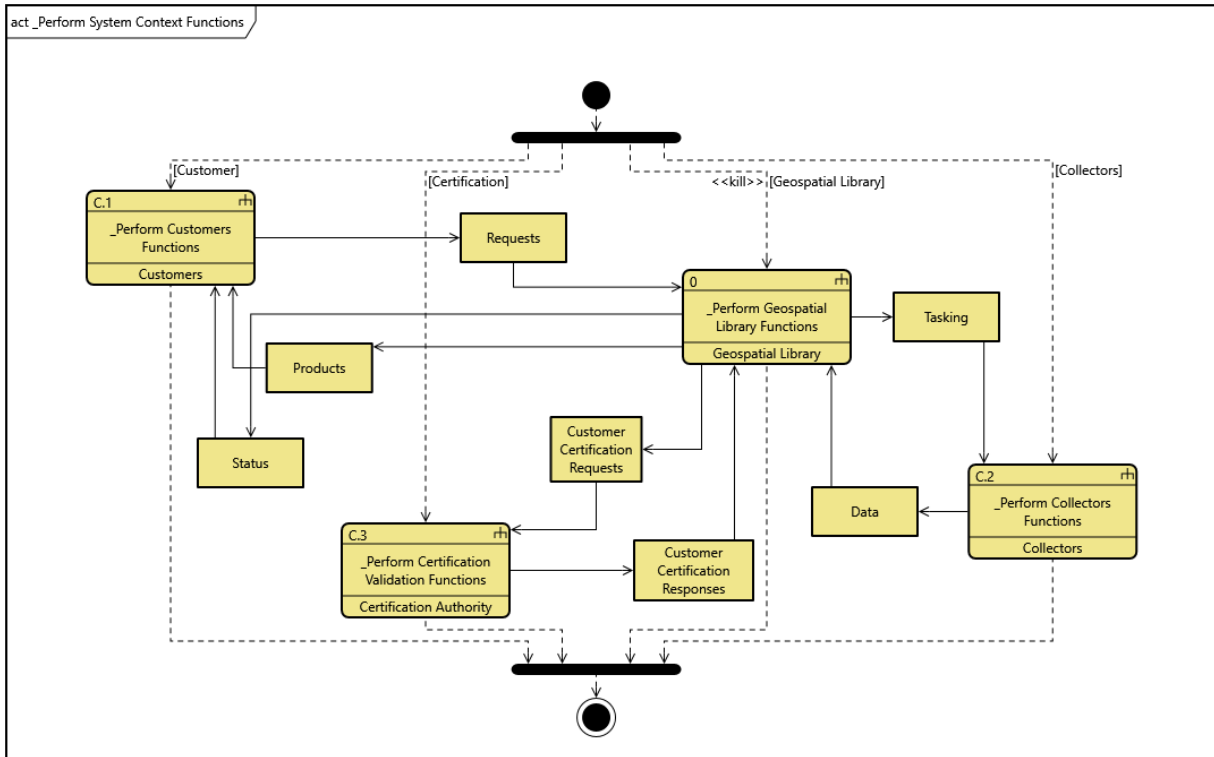


Figure 3: Data flow lines to and from Items are now fully customizable, including the ability to apply orthogonal routing

Node formatting is now retained during move and copy operations on the FFBD/EFFBD/Activity.

Block Diagram (IBDs/PBDs) Line Arrowheads

Line arrowheads can now be customized on block diagrams (IBDs and PBDs). On PBDs, the default “black ball” circular line ends are removed.

Line Label Rotation Updates

Line labels can now be rotated 360 degrees on all diagram types.

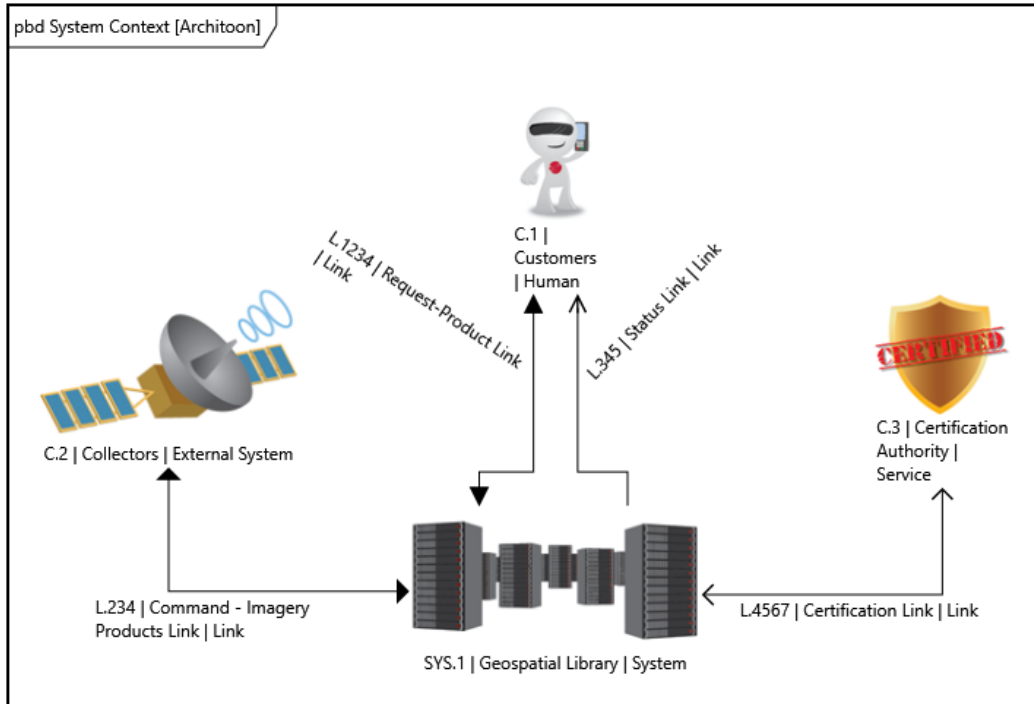


Figure 4: Example of a Block Diagram with Rotated Labels and Customized Line Arrowheads

Diagram/Project Explorer Synchronization Updates

New entities created from a diagram palette are now placed in the Project Explorer folder of the entity on which they are dropped instead of the root folder, resulting in a default project explorer organizational structure more aligned with the diagram's scope.

HIDE ATTRIBUTES IN THE PROJECT SCHEMA

You can now mark attributes as "hidden" in the project schema. This capability is designed for teams that want to emphasize the most important attributes while de-emphasizing those that are optional or less critical for their workflow.

When an attribute is marked as hidden, it is moved into a collapsible section at the bottom of the entity property sheet. This keeps the primary workspace focused and uncluttered, while still allowing users to access the full list of attributes at any time.

What's New in GENESYS 2026

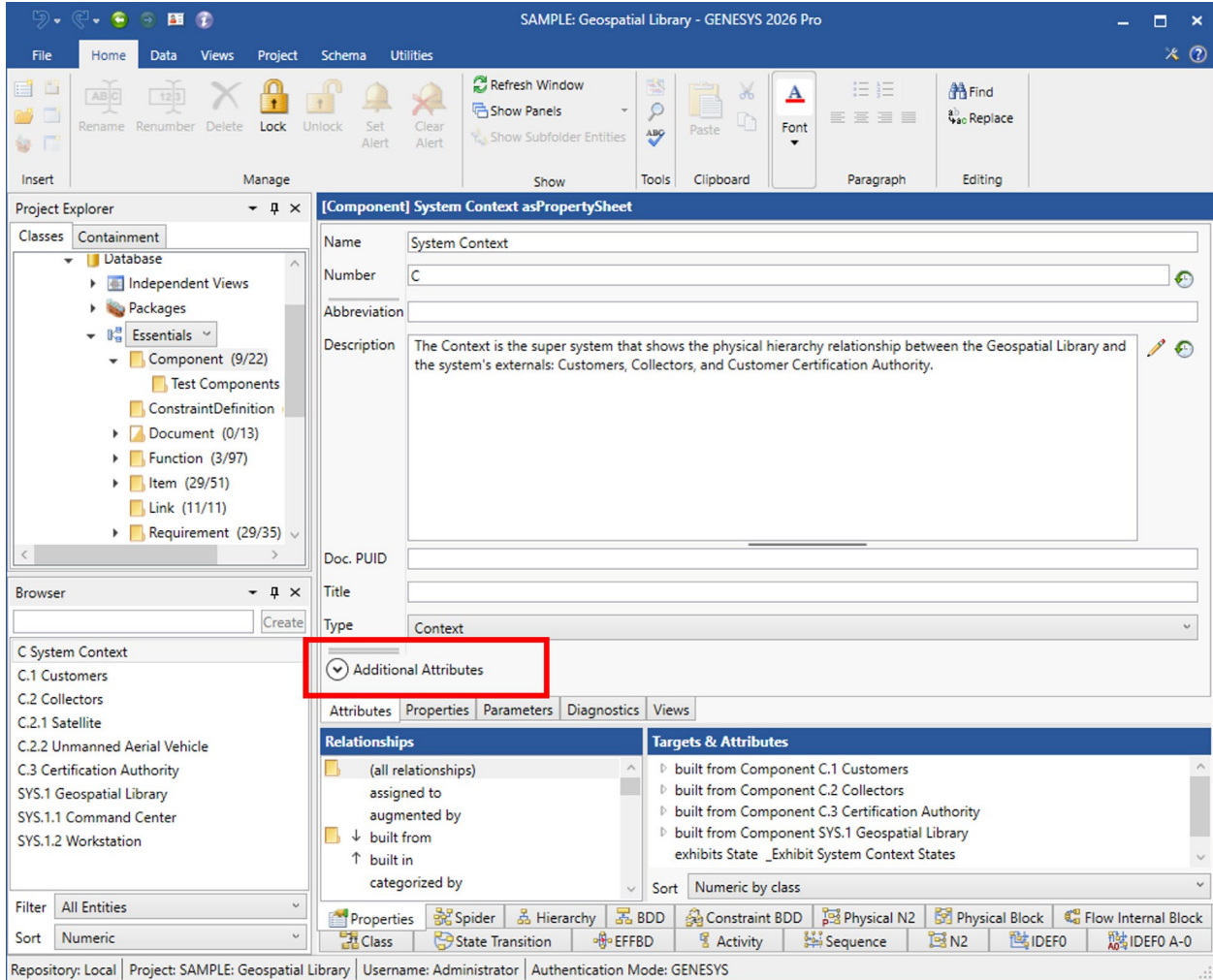


Figure 5: Hidden Attributes (Collapsed)

What's New in GENESYS 2026

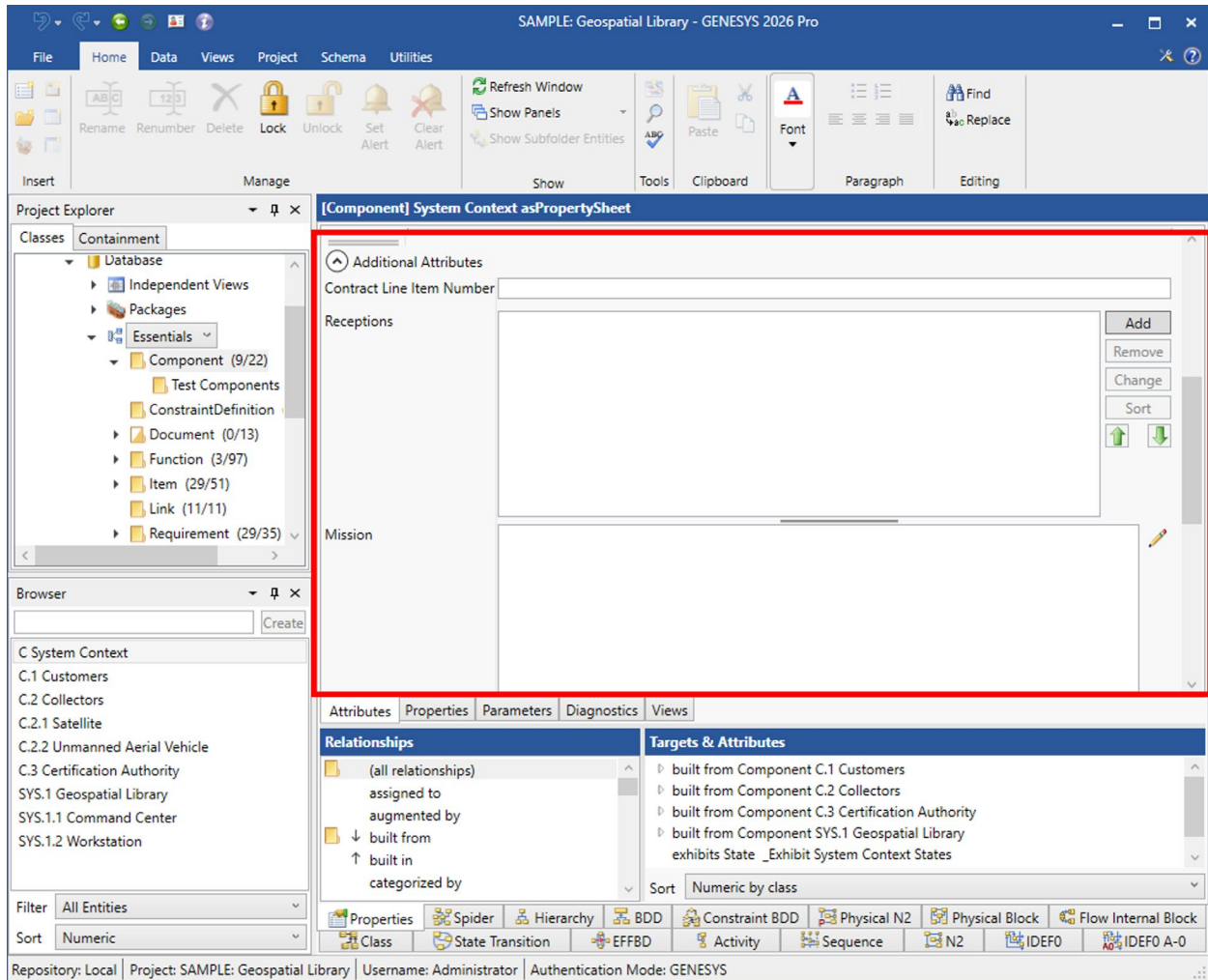


Figure 6: Hidden Attributes (Expanded)

AUDIT LOG UPDATES

The entity lock/unlock operation is now recorded in the audit log.

OTHER MINOR UPDATES

- The Property Sheet header now displays the entity's class name, making it easier to immediately recognize the type of the selected object without needing to cross-reference the Project Explorer.

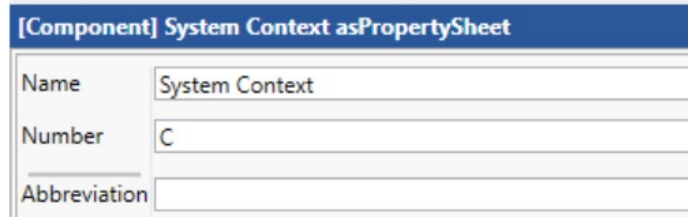


Figure 7: Property Sheet Header now Displays the Entity's Class Name in Brackets

- The Windows title bar now shows the active GENESYS project name, helping users quickly confirm which project they are working in. This is especially useful when multiple projects are open simultaneously.

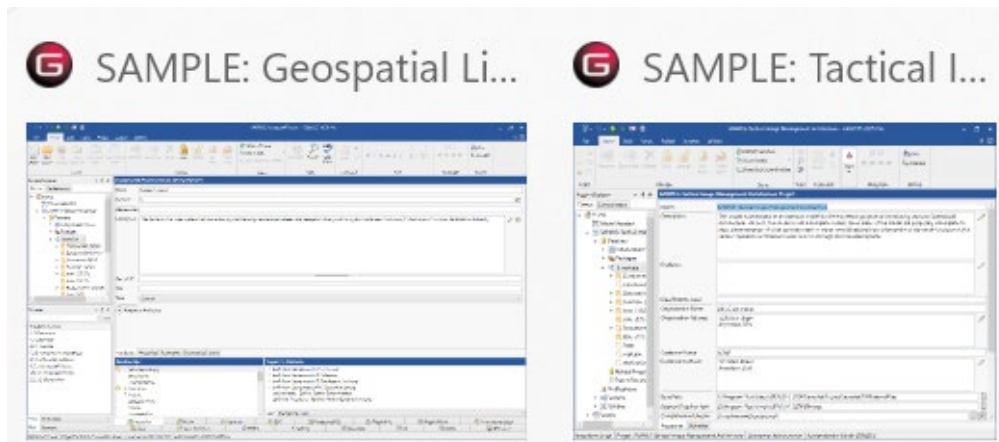


Figure 8: Example of the GENESYS Project Name shown in the Windows Title Bar

SCHEMA CHANGES

Base Schema

There are no updates to the Base Schema. The GENESYS 2026 Base Schema remains consistent with the GENESYS 2025 Base Schema.

Capability Schema

There are no updates to the Capability Schema. The GENESYS 2026 Capability Schema remains consistent with the GENESYS 2025 Capability Schema.

UAF Schema

The following updates have been made to the GENESYS 2026 UAF Schema:

- General: Inconsistent capitalization and spacing of class names corrected.
- **Measurement Set** and **Actual Measurement Set** classes added the *applies for* relationship to all other classes.
- **Operational Agent's** default *type* attribute set to "Operational Performer"
- *Refines/Refined by* relation between **Capabilities** added to St-Sr and St-Tx View Specifications

GENESYS 2026 RESOLVED ISSUES

The table below contains a list of issues that were resolved in GENESYS 2026. They are grouped by area and provide a description of the main observed behavior or symptom resolved in this release.

Reference	Description / Resolution Notes
Diagrams	
Use Case – The label cannot be resized, or orientation did not persist (10229)	Labels in the Use Case Diagram can now be resized, and orientation changes will now persist.
Use Case – Label cannot be resized or orientation persisted (10229)	Labels in Use Case diagrams can now be correctly resized, and orientation changes will now persist.
IBD – Unhandled exception when connecting link end to node (11544)	Unconnected Link on IBD can now be selected by the user and connected to another node with no unhandled exception.
IBD – Auto-routing failure when edge has no bends (11585)	Auto-routing has now been corrected when a node is dragged horizontally to another side of the current connection (the move introduces no bends to the line), now the line will snap to the correct side automatically.
IBD – Set as Conjugate Distance Issue (8590)	When "Set as conjugate" is executed for a component port linked to an external system in IBD, the distance between the external system and the component on the frame no longer approaches or moves away, positioning is now as expected.
EFFBD/Act Diagrams – Undo a move will cause a duplication (10709)	When CTRL-moving a node in the diagram, an immediate undo would leave an extra copy of the node on the diagram, this has now been corrected.
EFFBD/Act Diagrams – Paste if Copy/Cut uses default properties (3126)	When copy/cutting then pasting a part of an EFFBD/Act Diagram, the pasted structure was reset to the diagrams default properties, all custom properties were reset, they will not retain previously modified properties (color, spacing, node size/template, etc.)
IDEF0 A-0 – Logout from Model Assistant Pane throws exception (5761)	Corrected unhandled exception where IDEF0 A-0 diagram is opened in another window, and the Model Assistant panel selects the Project Explorer window, and a log out is requested.
Hierarchy – Removing nodes with duplicate children causes unhandled exception (11908)	Unhandled exception no longer occurs when multiple duplicate nodes are removed from the Hierarchy diagram
BDD – Hollow arrow and diamond symbols not transparent (11707)	Unfilled diamond and triangle symbols in the BDD now respect the background color set by the user.
Spider – Movement of entity nodes in related project is not saved. (11283)	When saving and redisplaying relationships between entities in different projects, the layout is updated correctly whereas previously it returned to its original state.
Spider – Change to Saved Hierarchy Definition (11279)	Issue resolved where another "Stored Definitions" is selected in the "Hierarchy Definition Editor", another already saved Spider Diagram view is also displayed with the contents of the selected "Stored Definitions".

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Reference	Description / Resolution Notes
General	
Cross-Project relationship duplicate entity id treated as a duplicate relationship (10842, 11650, 11873)	Relationships between duplicated project entities and the original project are no longer treated as duplicate relationships and can now be made correctly.
Cross-Project name not updating (11272)	Related Project name changes are now correctly updated in the current project.
Cross-Project relationships fail to find entity classes with same name but different ID (10843)	Custom cross-project relationships can now be correctly created based on name.
Duplicate Project – Unexpected cross-project relationships are removed when deleting duplicates (11280, 11662)	Removing the relationship in the duplicated project no longer removes the original relationship between the 2 un-duplicated projects.
Duplicate Project – Locked entity errors (11605)	Locked entities are not correctly duplicated in the duplicated project, previously they were not duplicated, and an error message was displayed.
Duplicate Project - Locked target entity prevents deletion of cross-project relationships (11648, 11657)	Delete and remove relationship commands no work as expected for the locked target of the cross-project relationship.
Duplicate Project names can be created in Japanese (11524)	Duplicate project names can no longer be created in Japanese.
Relationships – Directly recursive relationships bypass complement cardinality check (10844)	Cardinality limits of recursive relationships are now respected for custom relationships, and unhandled exception has been corrected for existing allowed recursive relationships.
Delete folder and entities with bulk entities timing out (10358, 11252)	Folders with many entities (>250) will now be deleted correctly.
Error when attempting to delete essential attribute of a class in schema mode (11278)	Attempting to delete attributes marked as essential is no longer allowed and no error message is displayed if attempted.
Export downloads 3x faster (9885)	Exported projects now download 3x faster than previous version of GENESYS.
Large import unhandled exceptions due to Timeout (11768)	Timeout for large imports was eliminated.
Search – Search Target set to “view” did not return results when Japanese characters entered. (8585)	Search target set to “view” not returns expected results when Japanese characters are entered.
Keyboard lag in text Fields (7284)	Keyboard entry into text field lag has been resolved and responds normally now.
Entity locking and unlocking not recorded in audit log (9575)	Entity locking and unlocking are now recorded in the audit log.
Matrix rows and column cutoffs (8591)	Corrected issue when creating relationships in a matrix, if the matrix is displayed in a size where either the rows or columns are partially cut off, scrolling and setting a relation caused the view to jump back to the initial display state.

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Reference	Description / Resolution Notes
Matrix Views – Complementary relationship addition when a single relation is chosen causes unhandled exception (9569)	Unhandled exception no longer occurs when double-clicking on the single relationship in the matrix view.
Crash when logging out from alternate window (3243)	Issue resolved where GENESYS would crash when log out was requested from a non-Project Explorer window.
Containment – entities and packages intermingled (9617)	Issue resolved where packages and entities could become incorrectly intermingled in the containment tree.
PUID Wizard fails on Requirement class on rerun (11439)	Issue resolved where PUID wizard was not adding PUID's for new requirement entities after it had already been executed. This issue only affected the requirements class.
Large text value freezes the form (3208)	Issue resolved where large text strings in text field.
Entity Browser displays wrong folder after dragging entity (11952)	Incorrect folder selection corrected, where the folder whose browser is displayed stays active in the Project Explorer instead of the folder receiving the moved entity.
Reporting	
Slow Initial Report Loading in Project Explorer (5941)	Resolved slow initial loading of reports in the Project Explorer.
Entity Views Report Band did not save the hierarchy definition (10633)	Hierarchy definition is now correctly saved in the Views Band.
Reports – Hangul characters not output properly (5532)	Issue resolved where Hangul characters were not output correctly.
Reports on large projects would timeout (11118)	Reports ran against large projects will now not timeout and will run to completion.
SDD report section 9 not outputting (11159)	Section 9: Resources have been corrected and is now properly outputting resource entities tied to the selected entities discovered in the SDD execution.
Licensing	
Sentinel Control Center User Restrictions (9871)	User restrictions via hostname on end user machine is now honored by the Sentinel Control Center
Connectors	
Excel Connector Insertion Errors (8595)	Corrected error when adding a new entity through the Excel Connector and a column contains a string attribute in the table definition.
Incorrect Excel workbook being updated on publish (11297)	Issue resolved when importing entities into GENESYS with multiple workbooks open, modifying and a different workbook during the upload causes that workbook to be overwritten with the contents of the workbook used in the upload.

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Reference	Description / Resolution Notes
Excel Connector – Line break codes removed for import to string type attributes (11289)	Line breaks are now removed from string attributes being imported through the Excel connector to allow correct import of the string to GENESYS.
UAF	
UAF BDD – Alignment errors (11076)	Alignment commands in the UAF BDD will no longer violate positioning constraints, allowing alignment controls to operate correctly.
UAF St-Sr & St-Tx allowed relations/classes updates (10964, 10963)	“refines/refined by” relation now allowed between Capability entities and ViewSpec class diagram updated.



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