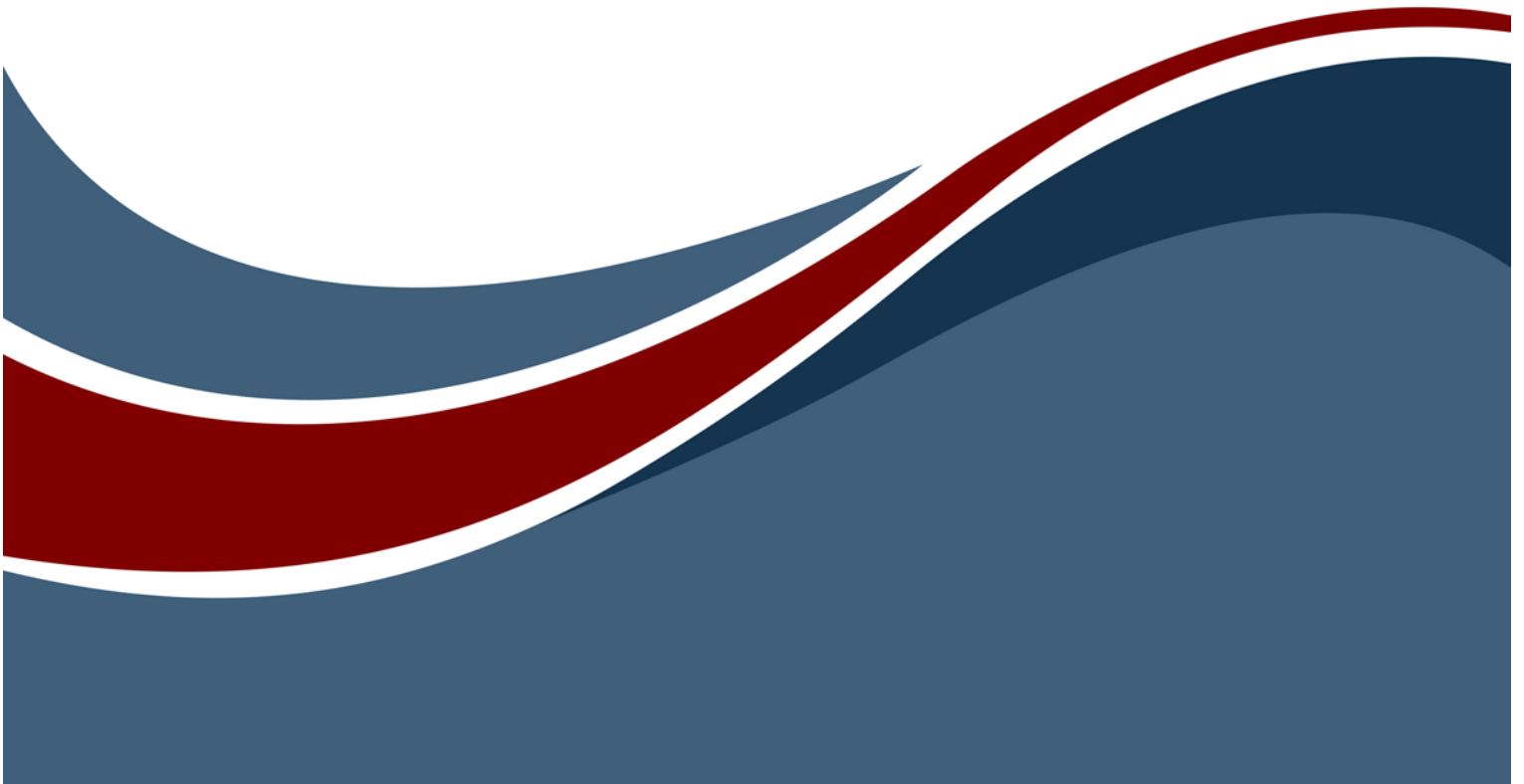




# What's New in GENESYS 2023 R2



## What's New in GENESYS 2023 R2

---

Copyright © 1998-2023 Zuken Vitech Inc. All rights reserved.


No part of this document may be reproduced in any form, including, but not limited to, photocopying, language translation, or storage in a data retrieval system, without Vitech's prior written consent.

### Restricted Rights Legend

Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in the applicable GENESYS End-User License Agreement and in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7013 or subparagraphs (c)(1) and (2) of the Commercial Computer Software - Restricted Rights at 48 CFR 52.227-19, as applicable, or their equivalents, as may be amended from time to time.

#### **Zuken Vitech Inc.**

2270 Kraft Drive, Suite 1600  
Blacksburg, Virginia 24060  
540.951.3322 | FAX: 540.951.8222  
Customer Support: [support@vitechcorp.com](mailto:support@vitechcorp.com)  
[www.vitechcorp.com](http://www.vitechcorp.com)

 GENESYS™ is a trademark of Zuken Vitech Inc. and refers to all products in the GENESYS software product family.

Other product names mentioned herein are used for identification purposes only and may be trademarks of their respective companies.

Publication Date: December 2023

**TABLE OF CONTENTS**

Matrix Views ..... 1  
Open a Project in the Command Line ..... 2  
SBE Vision Connector..... 2  
CSDL Class Addition: Digital Thread Package ..... 3  
CSDL Relationship language update ..... 3  
GENESYS 2023 Resolved Issues ..... 4



**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/](http://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 2023 R2

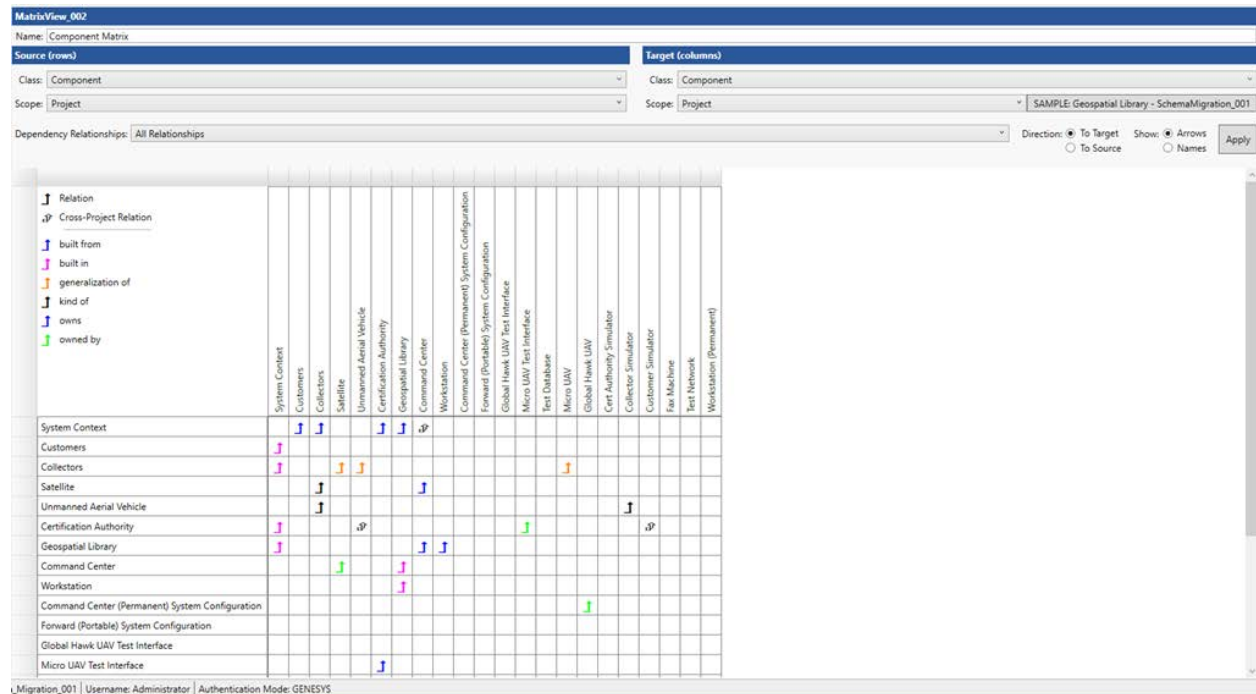
## MATRIX VIEWS

Matrix Views are a data visualization grid that shows the relationships between entities in a system. The Matrix View feature is a powerful tool for gaining insights into complex systems by providing a customized visual representation of how individual entities are related within a specified class and scope. In GENESYS, Matrix Views are part of the suite of Independent View types.

Use a Matrix View to identify gaps in your project's traceability or to show traceability coverage. For example, Matrix Views can demonstrate how system requirements are linked to lower-level design requirements, providing a way to visually verify that all requirements are adequately flowed down and connected across different system levels.

Another application example is to use Matrix Views to visually verify that all requirements and functions are allocated to components in the physical architecture. Users can also dynamically adjust the Matrix View to include various portions of the project, ensuring that each Matrix View is tailored to specific project needs.

Matrix Views can help to flag areas where entities may not have been properly related or allocated to other portions of the systems architecture model, providing a visual indication of completeness. The user can also manually create Relationships within the Matrix View as needed by double-clicking the cell where the desired relation is. By offering a clear, customizable, and interactive view of system relationships, the Matrix View feature enhances the user's ability to manage and track complex requirement structures.



Matrix View Example

### OPEN A PROJECT IN THE COMMAND LINE

GENESYS automatically opens one or more projects by looking for the "/p" command line argument followed by a project name. More than one argument and project can be specified. For example:

- genesys.exe /p "Project\_001"
- genesys.exe /p "Project\_001" /p "Project\_002"
- genesys.exe /p "Project\_001" /p "Project\_002" /p "Project\_003"

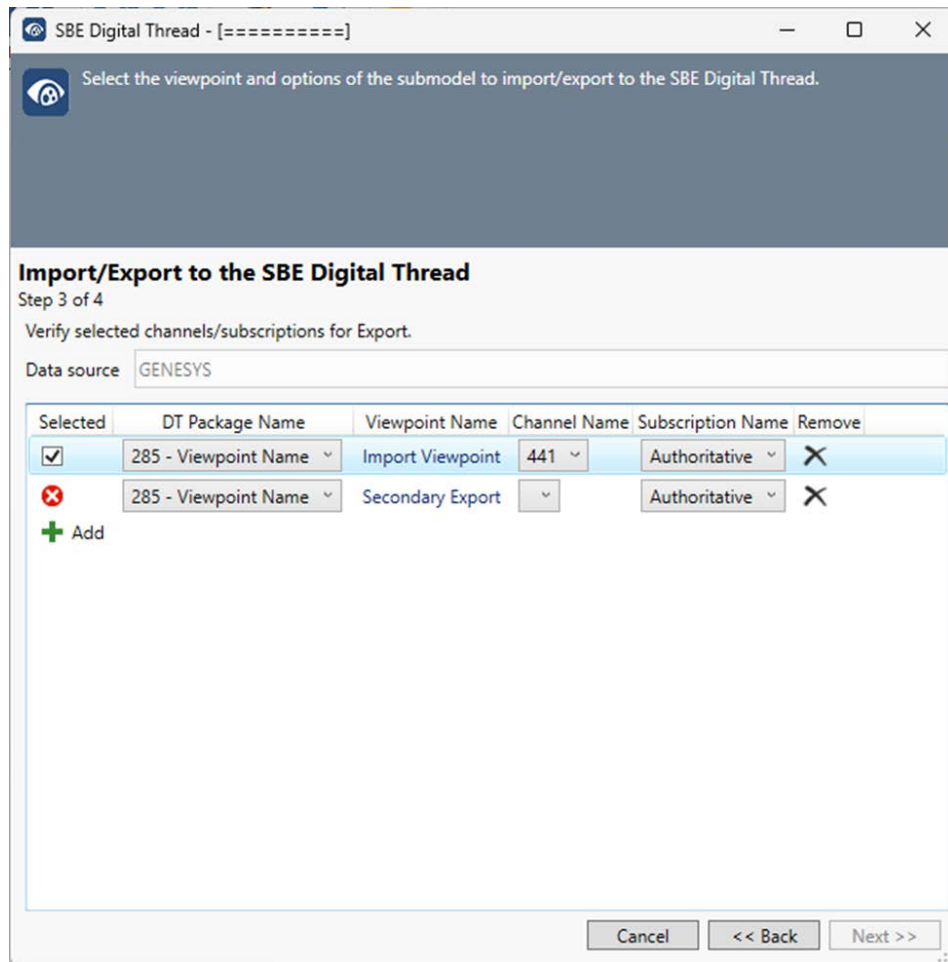
Names of projects specified that do not exist are ignored. All other command line arguments are ignored. Definitions

### SBE VISION CONNECTOR

The primary goal of this update is to allow data from GENESYS to round-trip between associated projects in other MBSE tools.

This release is focused on:

1. Providing additional capabilities to round-trip data between models.
2. Enhancements to clarify the ability to sync versus providing authoritative refreshes.
3. Multiple subscription selection.
4. Remembering DT channel settings.



New SBE Import/Export Wizard Leveraging Digital Thread Packages

### **CSDL CLASS ADDITION: DIGITAL THREAD PACKAGE**

GENESYS' Comprehensive Systems Design Language (CSDL) has previously included a class called Package, which is used to group related entities for organizational and navigation purposes. With the release of GENESYS 2023 R2, an additional class has been added to CSDL called DigitalThreadPackage (DTPackage), which is a specialized type of ContainerElement that is used to define the set of GENESYS entities that are paired to a specified channel and subscription in an external Digital Thread platform. This facilitates the import and export of the specified entities and their relationships to a Digital Thread platform. This approach ensures that there is a 1:1 mapping of entities and relationships in GENESYS to a specific digital thread repository, which guarantees that in round-tripping scenarios the data remains consistent. Currently, GENESYS supports integration with the SBE Vision Digital Thread platform. The "subscriptionID" of the SBE Vision DT subscription is held in an attribute in the DTPackage. A GENESYS project may have as many Digital Thread Packages as desired, allowing the modeler to ingest and/or egest multiple data sets from other Digital Engineering Ecosystem (DEE) tools.

In the GENESYS Project Explorer, Digital Thread Packages can be found under Database > Packages. General packages, used for grouping of entities within the GENESYS model, have been renamed "Basic Packages" (previously they were referred to as "Packages").

### **CSDL RELATIONSHIP LANGUAGE UPDATE**

In the CSDL Relationship, "Performs/Allocated to" has been changed to "Performs/Performed by." Some instances of "Allocated to" may still be observed in some reports during this transition.

Vitech is committed to using language that's intuitive, easy to understand, and easy to learn. This change supports our goal of maintaining consistent, simple language on the platform.

## GENESYS 2023 RESOLVED ISSUES

The table below contains a list of issues that were resolved in GENESYS 2023 R2. They are grouped by area and provide a description of the main observed behavior or symptom resolved in this release.

| Reference  | Description / Resolution Notes  |
|--|---|
| <b>Administrative Tools</b>  |   |
| A user can gain invalid access to security settings in Administrative Tools by changing the selected repository. (19376)   | If the user changed the selected repository with the Security tab open, the Security tab did not close if the user is not an administrator in the newly selected repository. The Security tab now closes properly in this scenario.   |
| <b>Diagrams – Use Case</b>   |   |
| Executing the Remove command on a use case that is an extension of another use case produces the error “Object reference not set to instance of object.” (20807) | The Remove operation now succeeds without error.  |
| <b>Export</b>  |   |
| The Export dialog shows projects from the wrong repository if the user is logged into more than one repository. (20740)  | The Export dialog will now show projects only from the repository logged into in the window from which the Export command is invoked.   |
| <b>Globalization</b>   |   |
| The application terminates when full-width numbers are entered directly through the Japanese IME. (19460)  | This error occurred when editing float and integer value types. The problem has been resolved and the application no longer terminates.   |
| <b>Licensing</b>   |   |
| Launching GENESYS for the first time when using a network license produces “Repository Connection Error” dialog. (20141)   | When launching GENESYS for the first time, the user received error “The GENESYS service on ‘localhost’ did not respond to the startup request” when using a network license. This error message no longer occurs if GENESYS successfully starts the local service.                      |
| <b>Project Explorer</b>  |   |
| The <b>Package</b> tree does not update dynamically under certain conditions. (21568)  | Deleting a <b>Package</b> containing child <b>Packages</b> did not properly reinsert the children as root <b>Packages</b> under certain conditions. The children are now inserted dynamically as root <b>Packages</b> when applicable without requiring the user to refresh the window. |
| <b>Simulation</b>  |   |
| The simulator does not correctly handle the release of captured <b>Resources</b> . (21095)   | Functions running in parallel could incorrectly release uncaptured <b>Resources</b> . Functions will no longer release <b>Resources</b> that are not captured if the functions do not execute.  |
| <b>Search</b>  |   |



## What's New in GENESYS 2023 R2

| Reference   | Description / Resolution Notes   |
|---|--|
| Match Whole Word option not functioning properly in Search. (20243, 20760)                | The Match Whole Word option did not properly match whole words. The option will now correctly match whole-word text.   |
| <b>Spell Check</b>  |  |
| The spell checker ignores the “spell as you type” user preference. (21518)                | GENESYS was highlighting misspelled words when this option was unchecked. Misspelled words are now only highlighted when this option is checked.   |
| The spell checker does not recognize words added to the custom dictionary. (21400)        | Words added to the custom dictionary were being ignored when GENESYS runs on a machine with Windows 11 22H2 or later update installed. Windows moved the custom dictionary location in the Windows 11 22H2 update. The updated location is now resolved. |
| <b>Table Views</b>  |  |
| The context menu is unavailable if there are no rows in the Table View. (20495)           | This scenario prevented the user from accessing the New Entity command to insert new entities into the table. The context menu is now accessible.  |
| The application terminates when editing a reference spec value in the Table View. (21172) | The exception has been resolved and the application no longer terminates.  |



2270 Kraft Drive, Suite 1600  
Blacksburg, Virginia 24060  
540.951.3322 | FAX: 540.951.8222  
Customer Support: [support@vitechcorp.com](mailto:support@vitechcorp.com)  
[www.vitechcorp.com](http://www.vitechcorp.com)