

Project® Connector Guide

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Publication Date: August 2022



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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

GENESYS help files.





Technical Papers

Searchable online access to 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.

Our team has also created resources libraries customized for your experience level:

All Resources	<u>Advanced</u>
<u>Beginner</u>	<u>IT / Sys Admin</u>
Intermediate	<u>Student</u>



PREFACE

This Project Connector Guide provides information on how to install and use an extension in Project developed to connect the GENESYS[™] database to Microsoft[®] Project[®]. The connector is a .NET application that extends the Project application provided in Microsoft Office[®] 2013, 2016, 2019, and 2021. Figure 1 displays the extended blank Project presentation.

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Figure 1 Sample Project Connector

The connector developed for Project allows for a one-way export of Project Element, Project Activity, Test Event, Test Activity entities from GENESYS to Project.

This guide describes the process to import and add the extension in Project, how to interface directly with the GENESYS repository and individual projects in the repository, how to use the features in the Project extension to export system design schedule information out of the GENESYS data repository for use in Project.

This guide is intended to augment the Model-Based Systems Engineering (MBSE) with GENESYS training course and the reference material provided with GENESYS. The ultimate goal of this guide is to expose the user to the features of the Project extension and thereby extend the use and application of GENESYS for both system design and development and project management associated with a system development project.

The following additional resources are available for use with this guide:

- For the definition of schema terms, the reader is referred to the GENESYS schema, which contains descriptions for each schema entity.
- For application of GENESYS to system and architecture design, the reader is referred to the GENESYS System Definition Guide (SDG) and Architecture Definition Guide (ADG) supplied with the GENESYS software installation.



GENESYS - PROJECT CONNECTOR INSTALLATION AND MANAGEMENT

1.1 Installing the Project Connector

The GENESYS Project Connector is installed via a standard, familiar Windows setup program. Please note that separate installers are available for either 64-bit or 32-bit Windows and Project operating environments. The connector is compatible with Microsoft Project 2010, 2013, 2016, 2019, and 2021.

There are separate files for the Project Connector depending on the architecture of the computer in which the software is being installed. The files are named:

- "GENESYS2022ProjectConnector_x86.exe" (for 32-bit Windows operating systems) and
- "GENESYS2022ProjectConnector_x64.exe" (for 64-bit Windows operating systems).

Double-click the installer .exe file to begin the installation.

Select the language to use. This is both the language of the installer and the language that GENESYS will be set to use. Click "OK".

GENESY	/S 2022 Project Connector - InstallShield Wizard	Х
ی	Select the language for the installation from the choices below.	
	English (United States)	/
	OK Cancel	

Click "Next."



Figure 2 Project Connector Installer, Step 1



Review and accept the licensing agreement terms and click "Next."

GENESYS 2022 Project Connector - InstallShield Wizard	×
License Agreement Please read the following license agreement carefully.	さ
IMPORTANT - READ CAREFULLY: This End-User License Agreen is a legal agreement between either an individual or a single entity (" "you") and Zuken Vitech Inc. ("Vitech") for the Vitech software prod below, which includes computer software and may include assoc printed materials, and "online" or electronic documentation (col "PRODUCT"). YOU AGREE THAT THIS AGREEMENT IS ENFORCEAB WRITTEN NEGOTIATED AGREEMENT SIGNED BY YOU. By installing otherwise using the PRODUCT, you agree to be bound by the terms of you do not agree to the terms of this EULA, do not install or use the Vitech reserves the right to change, modify, add or delete articles in any time, in accordance with the procedures described below in Sec	nent ("EULA") ^ 'Licensee" or uct identified iated media, lectively, the LE LIKE ANY g, copying, or f this EULA. If PRODUCT. this EULA at tion 11. THIS ~
 I accept the terms in the license agreement I do not accept the terms in the license agreement 	Print
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Figure 3 Project Connector Installer, Step 2

Click "Install" to begin the installation.

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Ready to Install the Program	4
The wizard is ready to begin installation.	U
Click Install to begin the installation.	
If you want to review or change any of your installation settings, exit the wizard.	click Back. Click Cancel to
InstallShield	
< Back II	nstall Cancel

Figure 4 Project Connector Installer, Step 3



The setup program will run and install the Project Connector. When the process completes, simply click "Finish" to complete the installation. The connector will now be available for use to import GENESYS project planning data into a Project file.



Figure 5 Project Connector Installer, Step 4

1.2 Managing the Project Connector

Add-ins to Project are sometimes disabled by customers. Note that in order for the connector to work, you may be required to adjust your settings by enabling the ability of Project to use Add-ins.

Once installed, the GENESYS Project Connector can be managed via standard Microsoft Office add-in tools. Note that the steps below apply to Microsoft Project 2010 installations, and may vary slightly in different versions of Project.

The extension to GENESYS in Project is accessed via the "GENESYS" tab in an open project file, as shown in the figure below. To manage the connector, first click the "FILE" tab.



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Figure 6 Project GENESYS and FILE Tabs

Once in the "FILE" tab, click the "Options" item from the menu on the left.



Figure 7 Project FILE tab, Options Menu Item



In the Options dialog that opens, select the "Add-ins" option from the menu on the left.

Project Options		8 3
General	General options for working with Project.	
Schedule	User Interface options	
Proofing	ScreenTip style: Show feature descriptions in ScreenTips	
Language	Project view	
Advanced	Default view: Gantt with Timeline	
Customize Ribbon Ouick Access Toolbar	Personalize your copy of Microsoft Office	
Add-Ins	User name:	
Trust Center	Initials: Always use these values regardless of sign in to Office. Office Background: No Background Office Iheme: Light Gray	
	Start up options	
	☑ Show the Start screen when this application starts	
	ОК	Cancel

Figure 8 Project Options Dialog, Add-ins Menu Item



In the Add-ins dialog that opens, select "COM Add-ins" from the "Manage:" combo box at the bottom, then click the "Go..." button.

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	No Disabled App	olication Add-ins		
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	Publisher:	<none></none>		
	Compatibility:	No compatibility inform	nation available	
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			OK	Cance

Figure 9 Project Add-ins Dialog, Manage COM Add-ins Option

In the COM Add-ins dialog that opens, select the GENESYS Project Connector item. Any of three actions can be performed:

- 1. The GENESYS Connector can be unchecked. Clicking "OK" will then disable the connector from running in workbooks.
- 2. If the GENESYS Connector is unchecked, it can be checked. Clicking "OK" will then enable the connector to run in workbooks.



3. The GENESYS Connector can be selected, and the "Remove" button can be clicked. The connector will be uninstalled.



Figure 10 COM Add-ins Dialog, Managing the GENESYS Connector

CONNECTING PROJECT WITH GENESYS

1.3 Connecting to GENESYS from Project

With Project opened on your desktop, navigate to a blank project, or open a new project. Select the GENESYS tab on the ribbon. You can then 'connect' Project by logging in to GENESYS using the icon on the left-hand side of the ribbon.

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\Box	Repo	ository / Proje	ct		Sour	ce		Options	Load

Figure 11 GENESYS Login in Project Using Ribbon Button



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Clicking on the GENESYS Login button will launch and bring up the GENESYS login screen.

Figure 12 Project with GENESYS Login

Login to GENESYS using the appropriate Username and Password. This connects Project with the Repository. Once logged into GENESYS, the controls on the GENESYS ribbon will be "active" and no longer be grayed out.

1.4 The GENESYS Ribbon in Project

There are several sections on the GENESYS ribbon in Project which are used to control access to the GENESYS database.

P	∗ 	t1 - Microsoft Project		Gantt Chart Tools	
File Task	Resource Project	View Team	GENESYS	Format	
Cogin Logout	Repository: Local Project SAMPLE: Ge	Source: All ProgramE	lements an 🔻	 ✓ Include related activit ✓ Load GENESYS extens 	ions Load
Repos	itory / Project	Source	2	Options	Load

Figure 13 GENESYS Ribbon in Project

The Repository / Project section of the ribbon controls access to a particular system design project in the GENESYS repository. Within this section the "Project" selection provides a drop-down menu where the



user can select the particular project within the database repository from which diagrams will be extracted. This is the project from which all information extracted into Project will be associated.

The "Source" section of the ribbon allows the user to select individual class information from the selected project in GENESYS. This allows the user to import Program Elements and Program Activities as well as Verification Events and Test Activities in a number of ways. The user can import by choosing:

- All ProgramElements, VerificationEvents, ProgramActivities, and TestActivities (this option will select all of the listed entities in the project model).
- All Program Elements and Verification Events
- All Program Activities (this option will select the ProgramActivity entities only)
- Program Elements in a selected Folder
- Program Activities in a selected Folder
- Program Elements and Program Activities in a selected Package

When using the selections in the ribbon, the connector iterates through the selected entities and imports the entities into Project.

The "Options" section of the ribbon controls the information added to Project when items are imported from GENESYS. "Include related activities" (when checked) will import those Program Activities and Test Activities associated with a Program Element of Test Event. "Load GENESYS extensions" will import the items into Project and include several attributes for identifying the entity in GENESYS. The attributes included are: GENESYS Number, GENESYS ID and, GENESYS Class.

The Project Connector provided in GENESYS includes a Project file which can be used to add the GENESYS attributes. The Project extension is located in the folder: C:\Program Files (x86)\Vitech\GENESYS 2022 Project Connector\Templates. The user can import this template in to a project file to extend the attributes of a project task and provide traceability to the GENESYS project file.)

IMPORTING INFORMATION INTO PROJECT FROM GENESYS

1.5 Example of importing a set of WBS entities from GENESYS into Project

This section provides guidance and an example of importing a set of GENESYS Program Elements and Program Activities into Project. The current Project Connector provided with GENESYS 2021 R2 provides a one-way export out of GENESYS into Project.

In a typical use case, the design team has populated the Program Element and Program Activities (and/or Verification Events and Test Activities) in GENESYS that the team plans to use for the system design. The goal is to export these entities from GENESYS into Project for review and use by the project control team.

The Project Connector should be installed and set-up as discussed in Sections 1.1 and 1.2 above.

Then, with Project open, the user can connect to the GENESYS project as discussed in Section 1.3 by selecting the GENESYS Login button (on the left-hand side of the GENESYS tab) and entering the appropriate login credentials.

Next, the user should select the appropriate Project from the drop-down menu.

The user must then select the source of the entities to be imported. The user will make one of the selections (as listed in Section 1.4) to import the information desired to be imported into Project.



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The following figure provides an example ready for import into Project.

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File Task Resource Project	View New Tab GENESYS	Format	a 😮 🗗
Cogin Logout Repository: Local Project MS Project D •	Source: All ProgramElements *	 ✓ Include related activities ✓ Load GENESYS extensions 	Load
Repository / Project	Source	Options	Load

Figure 14 Importing Entities into Project

Selecting the "Load" button will import the entities into Project. In the example shown, the Program Elements and related Program Activities will be imported into Project. The Start Date and End Date attributes in GENESYS are used to establish the Start and Finish Dates in Project. The hierarchy of Program Elements and the construct-based relations of Program Activities established in GENESYS are captured when the information is imported into Project. Figure 15 shows an example of Program Element, Test Event, Program Activities, and Test Activities imported into Project.

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	5			Critical Design Review (CDR)					3 days	Mon 04/09/18																	
	6			Configuration Management					194 days	Tue 08/01/17																	
	7		->	Contract Management				1	194 days	Tue 08/01/17																	
	8			Data Management				1	194 days	Tue 08/01/17		-												-			
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Figure 15 Example GENESYS Project Imported into Project



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