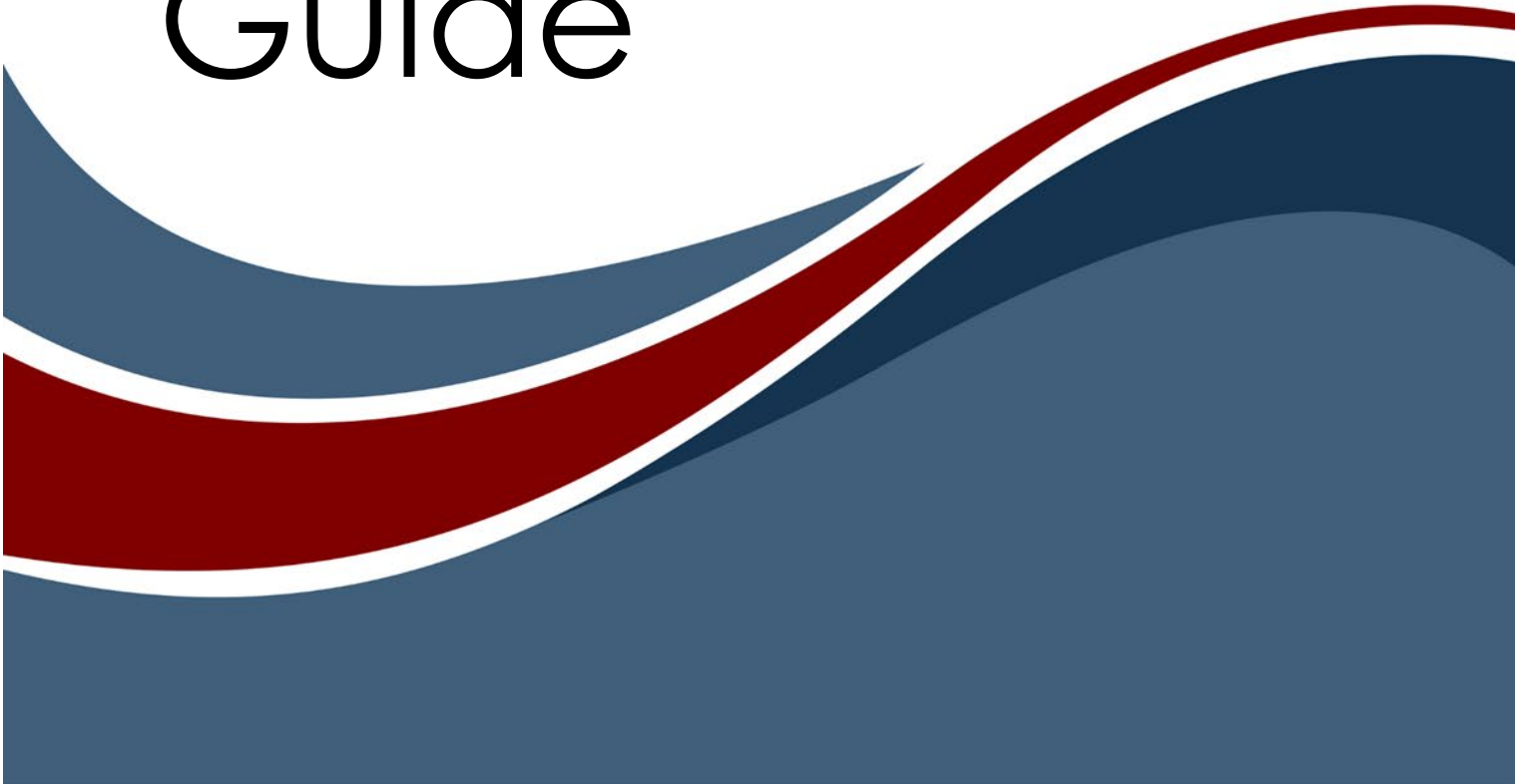




University
Edition
Installation
Guide



University Edition Installation Guide

Copyright © 2018-2024 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
+1 540 951 3322 | Fax: +1 540 951 8222
www.vitechcorp.com

Customer Support:

+1 540 951 3999 | support@vitechcorp.com



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

The license and/or entitlement management portions of GENESYS are based upon one or more of the following copyrights: Sentinel® EMSaaS, Sentinel® LDK. Copyright © 2024 Thales. All rights reserved.

Sentinel® is a registered trademark of Thales. Other product names mentioned herein are used for identification purposes only and are trademarks of their respective companies.

Publication Date: December 2024

TABLE OF CONTENTS

Getting Started 1

Why Use GENESYS? 1

 GENESYS in the Classroom 2

 Learning GENESYS 2

 Want to see GENESYS where you work? 2

 What's included - GENESYS University Edition 3

Step 1: Installing GENESYS 2024 University Edition 4

 Installing GENESYS University Edition 4

 Configuring Microsoft Windows Firewall for GENESYS 7

Step 2: Licensing GENESYS Products 9

 General Instructions for Activating a GENESYS License 9

Step 3: Getting Started with GENESYS 2024 University Edition 12

 Logging in to a Local Repository 12

 Logging in to a Remote Repository 14

Additional Tips 16

 Check for Latest Service Packs 16

 GENESYS Training 16

 GENESYS Help and Documentation 16

 Sample Solutions 16

 Disaster Prevention/Recovery 16

 Uninstalling GENESYS 17

 Reporting Problems / Making Product Suggestions 17

Appendix 18

 Prerequisites for Installation 18



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.

University Edition Installation Guide

GETTING STARTED

Welcome to the GENESYS 2024 University Edition Installation Guide. This guide is intended to assist you with the three steps required for getting started using GENESYS University Edition:

- installing the software,
- activating a GENESYS University license, and
- starting GENESYS.

If you have any problems or questions regarding installation or licensing, contact us:

For installation or general product support

support@vitechcorp.com

University Program Manager

+1 540.951.3322 x1113

universityprogram@vitechcorp.com

For information on systems engineering and GENESYS

Visit our website at www.vitechcorp.com

WHY USE GENESYS?

Developing complex systems requires more than today's office software and requirements tools can deliver. Product design and engineering demand a powerful support environment for life-cycle architecture. Whether designing a commercial product, an IT service, or a military system, satisfying diverse customers under schedule and budget constraints requires an integrated solution—a solution to synchronize requirements, analysis, and architecture; a solution to guarantee consistency and reduce risk; a solution to deliver technical and management insight into complex issues. That solution is GENESYS.

GENESYS is a fully integrated, flexible approach to collaborative product design specifically developed by systems engineers for systems engineers. In fact, 9 out of the 10 top U.S. defense contractors are Vitech customers, along with many of the Fortune 500 companies. Supported by an experienced staff of engineering professionals with real-world knowledge of the latest approaches and proven project experience, GENESYS puts project success first.

Moving beyond the document-centric or view-centric packages of the past, GENESYS delivers a truly collaborative design-centric approach to product development. GENESYS provides comprehensive traceability from need definition through requirements and analysis to architecture and test. Built upon a proven approach and a central integrated design repository, GENESYS includes extensive function and behavior modeling notations to help you better understand the dynamics of your design, integrated product simulation derived directly from your models, and on-demand automatic document and view generation. With numerous views tailored to the multitude of engineering and management tasks, GENESYS enables your team to focus on engineering and architecting your system.

Whether your project requires formal design specifications or informal web-based documentation, strict processes or agile design explorations, top-down approaches to a new system or middle-out/bottom-up reengineering of existing systems, GENESYS supports your needs.

University Edition Installation Guide

GENESYS in the Classroom

Each year thousands of students use GENESYS University Edition at no cost in their classrooms. Vitech offers this option because we believe that investing in education is the best way to accomplish our global mission of changing the systems engineering world. At Vitech, we believe system thinking and our solutions can help address many of the challenges facing society. We understand that we are opposed by strong “forces of nature” such as apathy, complacency, ignorance, expediency, and preconceived notions of systems disciplines, but students who are ready to learn are partners in resisting those forces.

By using GENESYS in your learning environment, you are taking part in the greater mission to change how we all operate for the better. GENESYS is more than a software tool – it is a partner in your endeavors to take full advantage of a different way of thinking – model-based systems engineering (MBSE).

For those students who are not familiar with the concepts behind MBSE, or who would like to know more about it, we invite you to download the free PDF copy of *A Primer for Model-Based Systems Engineering* by David Long and Zane Scott at the following link: <https://www.vitechcorp.com/mbse-primer/>.

Or, you can purchase a bound copy from [Amazon.com](https://www.amazon.com).

Learning GENESYS

As a software product that is powerful enough to handle the most complex of design, simulation, modeling, and documentation needs, getting the most out of the product requires some training. In particular, Vitech advises students new to GENESYS to use the various resources listed under GENESYS Help and Documentation in this document. In addition, students have access to the following areas:

<https://www.vitechcorp.com/online-resources/> - Includes screencasts, webinar recordings, white papers, technical studies, and case studies regarding GENESYS and general systems engineering

<https://systems-wise.com> - This page is full of great tips, tricks, and discussions revolving around GENESYS and MBSE.

In addition, support is available every weekday at the contact info listed on page 1.

Want to see GENESYS where you work?

Many of our University Program participants are continuing their education while they work in a variety of industries, ranging from defense to energy, and from software development to healthcare. For the students who aren't already working, they often find themselves employed after graduation in these same industries. After getting a taste of what GENESYS can do in class projects, our students quickly realize the possibilities of what it could mean for complexity management at their workplaces.

If you'd like to bring Vitech to your office in the form of GENESYS software, training, or professional services, Vitech will work with you to provide demonstrations, evaluation copies of the software, and other information on designing a custom MBSE solution for you. Just send an email to UniversityProgram@vitechcorp.com to get started!

University Edition Installation Guide

What's included - GENESYS University Edition

This University Edition of GENESYS is provided under a special agreement for academic use only. It is identical to the commercial version of GENESYS with the following exceptions:

- The license will expire in alignment with the instructor's class schedule.
- The University Edition will import/export GENESYS project files in a GNUX format.
- Users are limited to opening a single project at a time. Multiple projects can be loaded into the local repository, but only one may be open at a time.
- Each project is limited to 10,000 entities.
- All diagram outputs have a watermark "University Edition – Academic Use Only."

Functional Capabilities	University License	Commercial License (GENESYS and GENESYS Pro)
Data exchange with other tools	X	X
Completeness checks	X	X
Design Integrity checks	X	X
Customized tabular output	X	X
System description document	X	X
Web page (HTML) output	X	X
Database size	10,000 objects for each project	Unlimited
Custom reports	X	X
Simultaneous projects		X
Schema changes	Unlimited	Unlimited
Government specifications	X	X
Model-based systems engineering	X	X
Business process modeling	X	X
Comprehensive traceability	X	X
Behavior modeling and analysis	X	X
Behavior model simulation	X	X
Embedded simulation operands	X	X
Resource modeling	X	X
Requirements management and analysis	X	X
Risk management	X	X
Program management	X	X
Verification and validation	X	X
Work breakdown structures	X	X
Product/component structure	X	X
Item and data flow	X	X
Traditional (structured) and SysML representations	X	X
Model integration	X	X
Import and export of change files	X	X
Connectivity with external connectors	X	X

If you wish to use GENESYS for commercial or other purposes, please contact Vitech at +1.540.951.3322 or via e-mail at info@vitechcorp.com. Vitech has an official price list which provides for indefinite or subscription licenses of GENESYS as well as systems engineering training classes and purchased technical services.

University Edition Installation Guide

STEP 1: INSTALLING GENESYS 2024 UNIVERSITY EDITION

The following section provides step-by-step instructions for installing the University Edition of GENESYS. If you have any questions or need assistance at any point during this process, please contact Vitech Customer Support at +1.540.951.3999 or via email at support@vitechcorp.com.

Following product installation, please refer to Step 2: Licensing GENESYS University Edition.

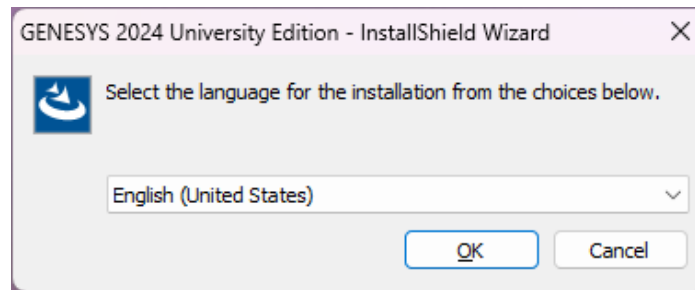
Installing GENESYS University Edition

Note: GENESYS University Edition requires connection to the Internet to download SQL Server Express. If you are installing GENESYS onto a machine which does not have Internet access, you will have to obtain SQL Server Express and install it separately. Please contact Vitech Customer Support for instructions.

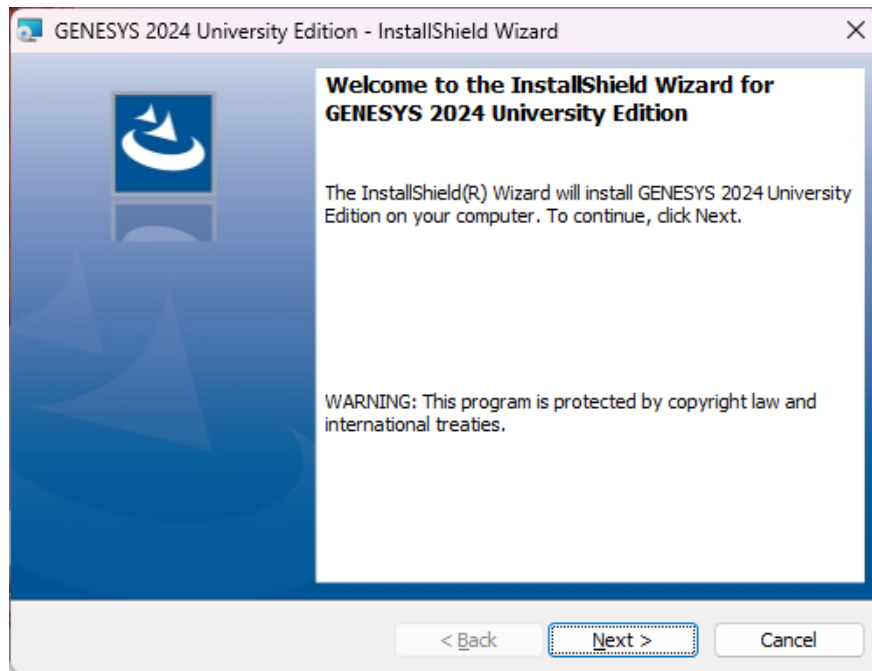
1. Download the GENESYS 2024 University Edition installer from the Vitech website and open the file. The InstallShield Wizard will launch.

NOTE: The installation screens will say *University Edition*.

2. Select the language to use for the installation. Click "OK".



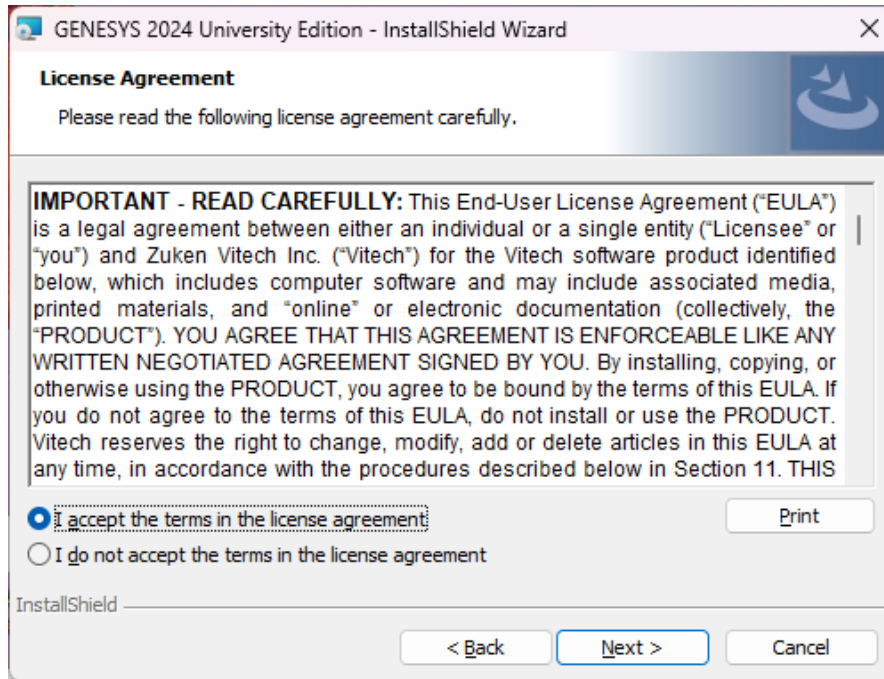
3. In the InstallShield Wizard window, click **Next**.



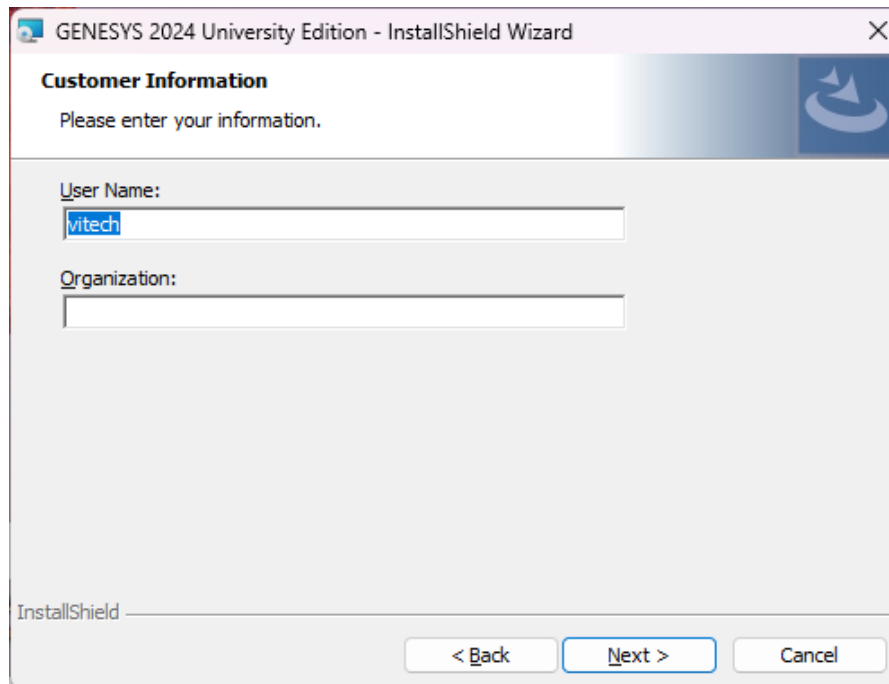
4. Review the end-user license agreement which governs the use of the GENESYS University Edition.

University Edition Installation Guide

- If you accept the terms of the license agreement, click the radio button next to “*I accept...*” and then click **Next** to proceed with the installation.
- Or, if you do not accept the terms of the license agreement, click **Cancel** to end the installation.



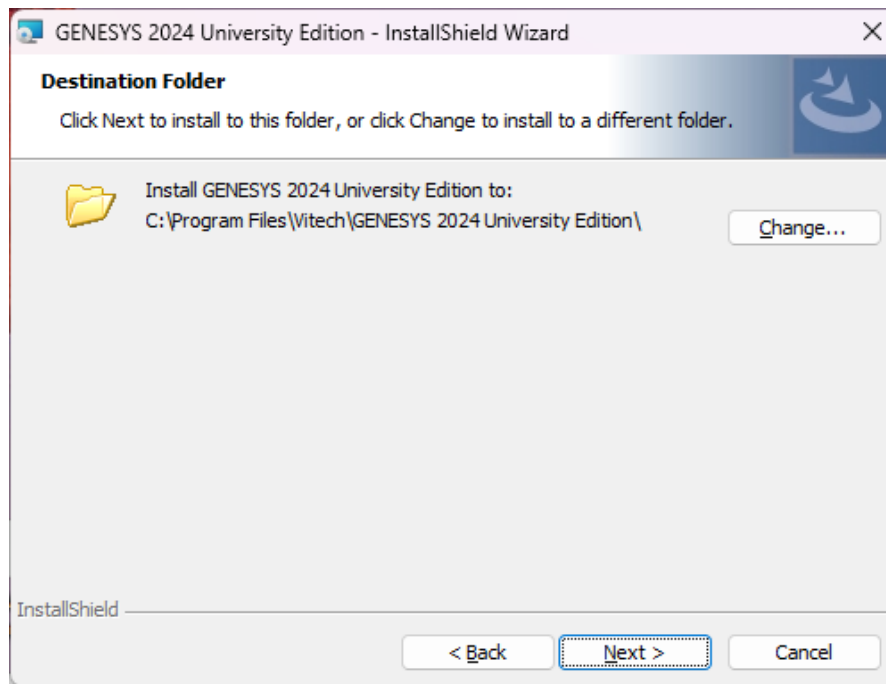
5. Optionally, type your name in the User Name field and type your organization's name in the Organization field. Click **Next**.



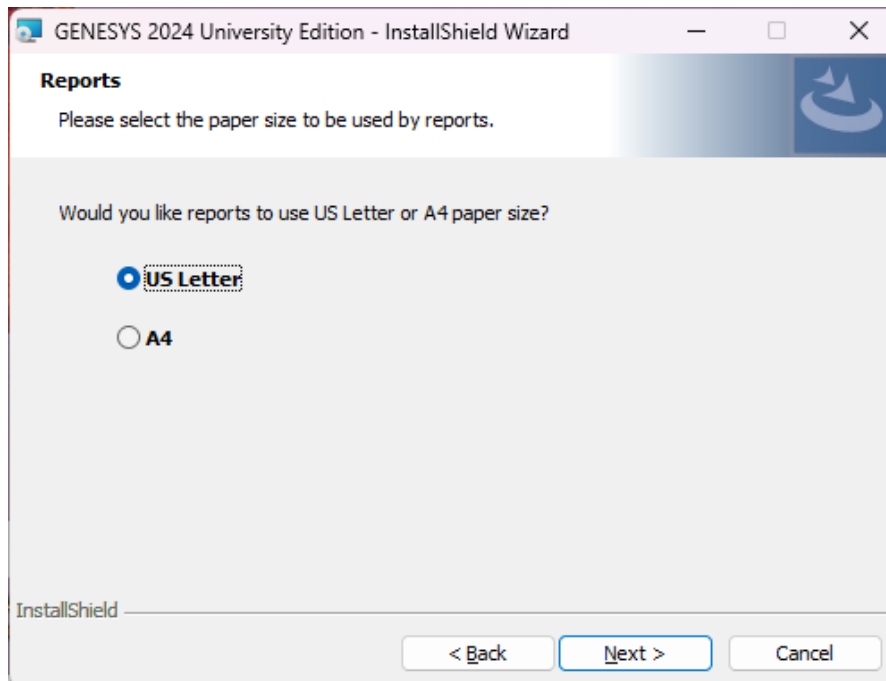
6. The installation wizard prompts you for the location to install GENESYS University Edition. By default, Windows applications are installed to the program files directory. You can either:

University Edition Installation Guide

- Confirm the location and click **Next**.
- Or, click **Change** to select a different installation location; then click **Next** after selecting the alternate location.

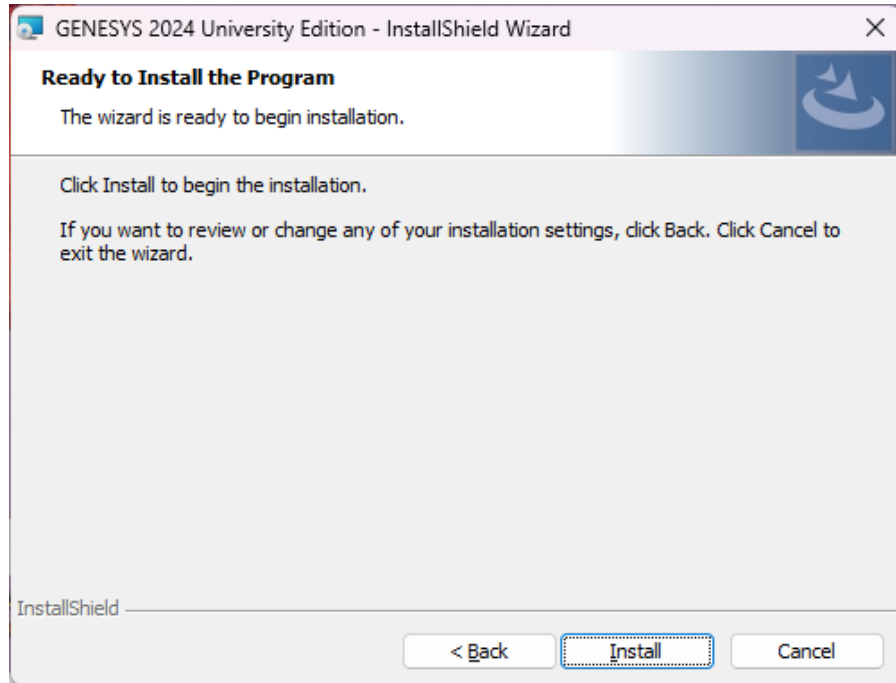


7. GENESYS reports can be configured to use either US Letter or A4 paper. Select the appropriate paper size and click **Next**.

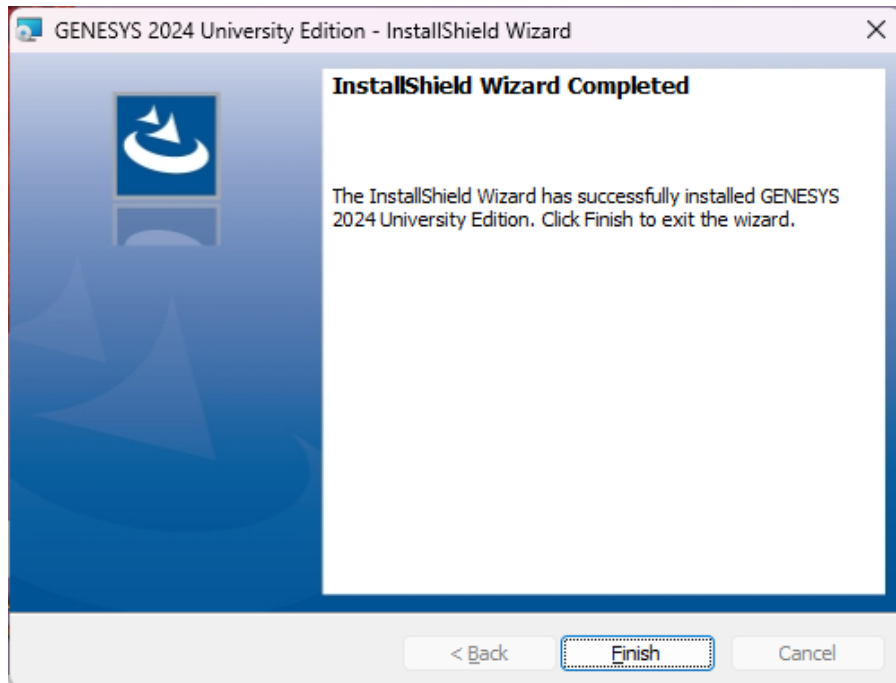


University Edition Installation Guide

- Click **Install** to begin the installation or click **Back** to change settings.



- After the installation routine completes, click **Finish**.



Configuring Microsoft Windows Firewall for GENESYS

If the Microsoft Windows Firewall is being used within your enterprise, you may need to create firewall exceptions.

University Edition Installation Guide

GENESYS 2024 University Edition

Firewall exceptions for GENESYS 2024 University Edition are needed only when connecting to a repository on another machine. This is true for connections to another installation of GENESYS 2024 University Edition.

Please note that all instructions below are for Windows 10 and 11 Firewall. If you are using a different version of Windows or another firewall program, your process may differ.

Create a new Inbound Rule to allow TCP port access.

1. Click **Start**, then type “*firewall*” and press **Enter**. The Windows Firewall window will open.
2. Select **Advanced settings**.
3. In the left-hand pane, click **Inbound Rules**.
4. In the Actions pane (on the right) click **New Rule**. The New Inbound Rule Wizard will open.
5. Select **Port**, and then click **Next**.
6. Select **TCP**.
7. Specify port number “39151.” (Note: Port 39151 is the default port used by GENESYS 2024 for remote repository communication. If you changed this default, you must use the changed port number here.)
8. Click **Next**.
9. Select **Allow the connection**, then click **Next**.
10. Select the network profile to which you would like this rule to apply. (If you are unsure which to select, please contact your IT organization.)
11. Click **Next**.
12. In the Name field, enter “GENESYS 2024 Repository Communication,” then click **Finish**.

If you are using a network-enabled license and are having trouble accessing your license through your network, you may need the following firewall exception on the computer that hosts the license.

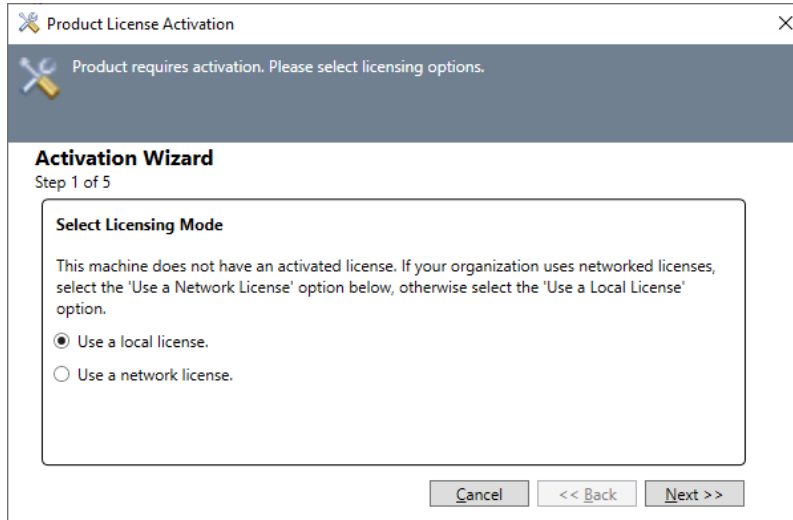
1. Click **Start**, then type “*firewall*” and press **Enter**. The Windows Firewall window will open.
2. Select **Advanced settings**.
3. In the left-hand pane, click **Inbound Rules**.
4. In the Actions pane (on the right) click **New Rule**. The New Inbound Rule Wizard will open.
5. Select **Program**, and then click **Next**.
6. Click **Browse**.
7. Navigate to the **C:\Program Files (x86)\Common Files\Aladdin Shared\HASP** folder and select the **hasplms.exe** file.
8. Click **Open**, then click **Next**.
9. Select **Allow the connection**, then click **Next**.
10. Select the network profile to which you would like this rule to apply. (If you are unsure which to select, please contact your IT organization.)
11. Click **Next**.
12. In the Name field, enter “*Sentinel LM*,” then click **Finish**.

STEP 2: LICENSING GENESYS PRODUCTS

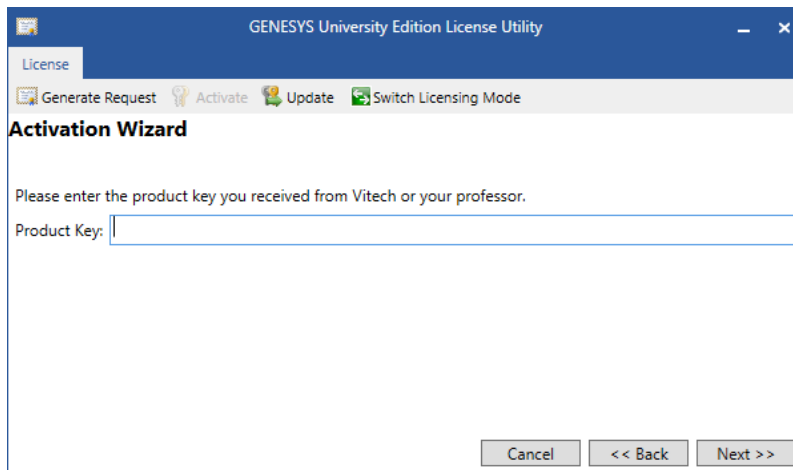
You should have been given a product code by either your professor or Vitech. If you have any questions or need assistance at any point throughout this process, please contact Vitech Customer Support at +1 540.951.3999 or support@vitechcorp.com.

General Instructions for Activating a GENESYS License

1. Install GENESYS University Edition.
2. Upon first launch, you will be prompted to complete the Product Activation.
3. Select the Licensing Mode as specified by your professor and click **Next**. In most cases you will choose to have a local license.

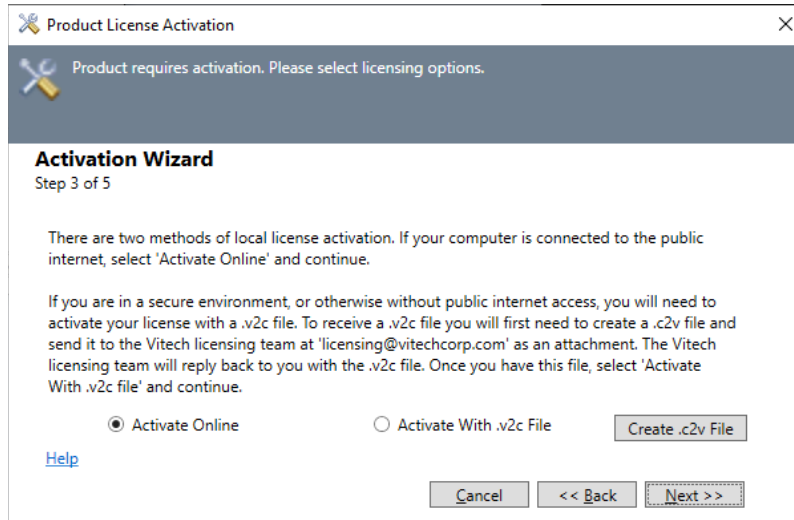


4. Enter your email address.
5. Copy and Paste the Product Key provided by either your professor or Vitech into the blank field and click **Next**.

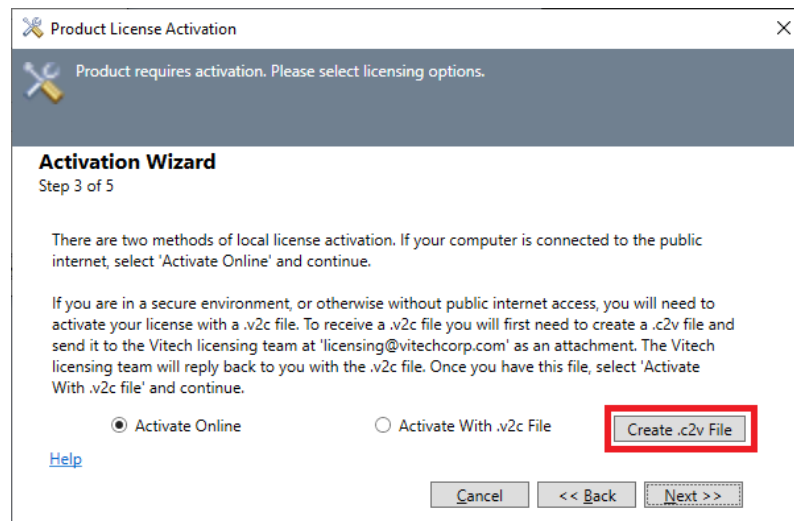


University Edition Installation Guide

6. Select your activation method. In most cases, **Activate Online** will be used. Click **Next**.

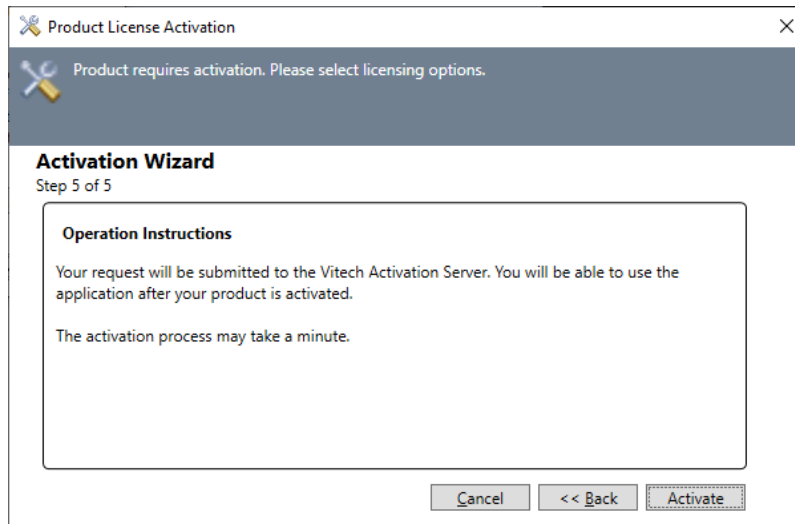


- a. If for some reason you cannot activate online, please choose **Create .c2v File**, save the file, and then send it to licensing@vitechcorp.com with a note that you require a manual activation. Once our licensing team receives the request, we will send you a corresponding .v2c file. Once that file is received, save it to disk, and select **Activate With .v2c file**.

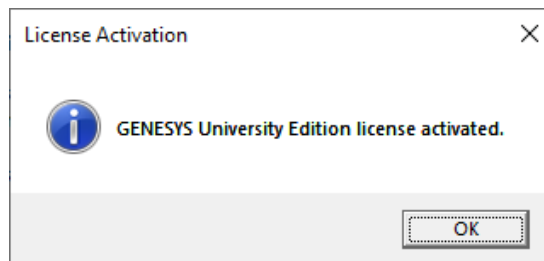


University Edition Installation Guide

7. Click **Activate** to apply the Product Key.



8. You should receive a confirmation message that the software has been activated successfully.



STEP 3: GETTING STARTED WITH GENESYS 2024 UNIVERSITY EDITION

This section describes the basic steps required to launch GENESYS and log in.

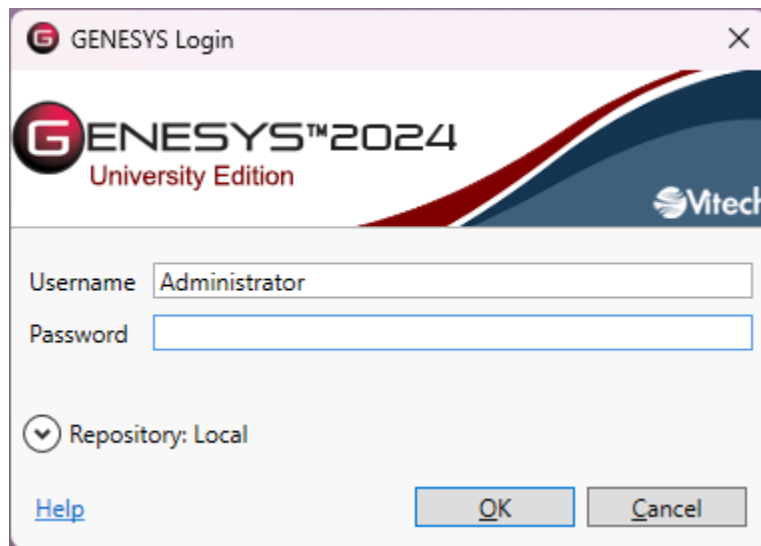
Logging in to a Local Repository

The installation program creates a new program group entry on the start menu with the title "GENESYS 2024 University Edition." It contains an entry labeled "GENESYS 2024 University Edition." Simply click on this menu item.

Note: If the Microsoft Windows Firewall is being used and you are using a network-capable license, a firewall window will appear when you start GENESYS for the first time. Windows Firewall will ask you to choose to either block or unblock. Select **Unblock**. The GENESYS Login window will then appear.

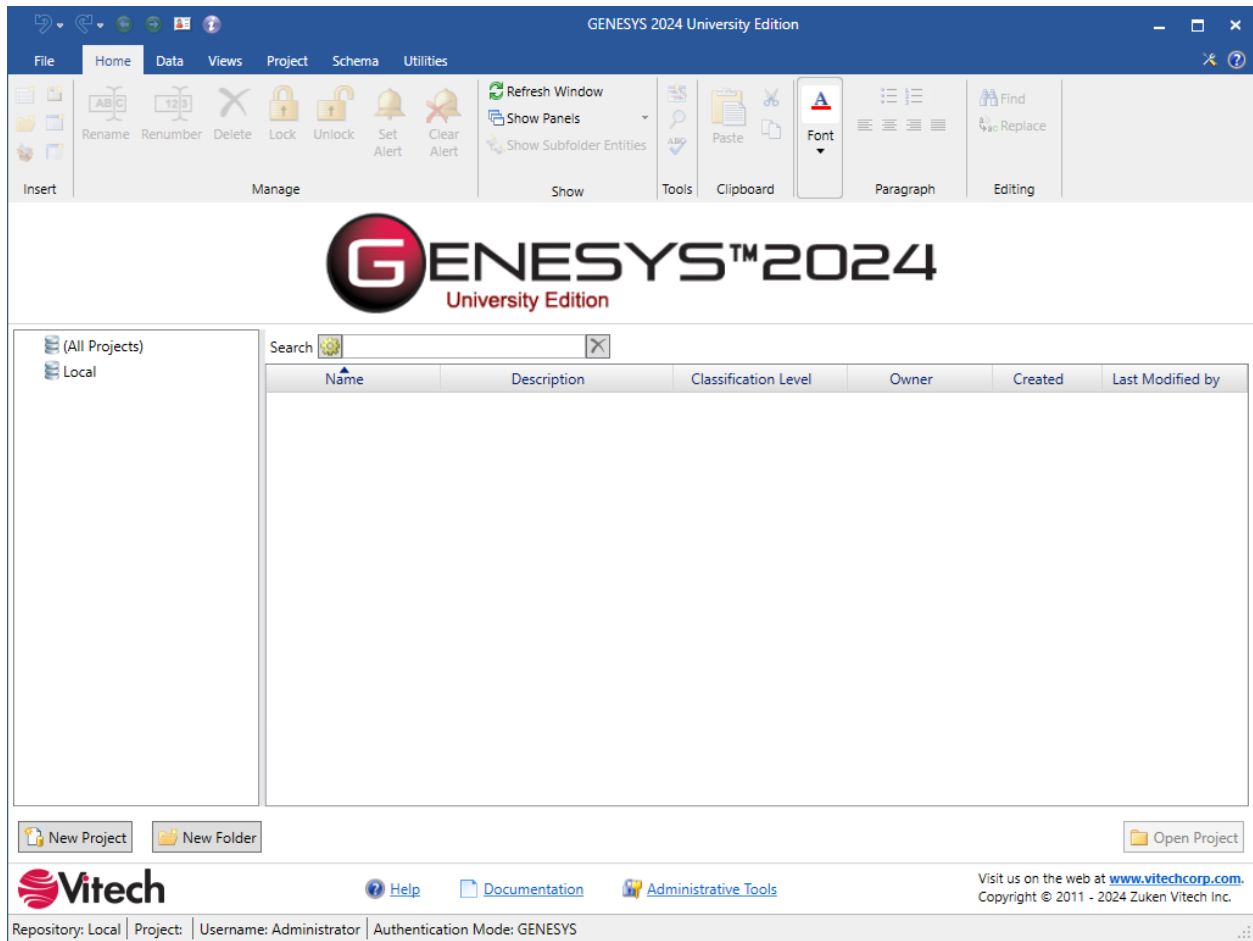
The GENESYS Login window shown below will open. GENESYS is configured with one initial user account—the Administrator account. The username and password are case sensitive. Log in as shown below:

Username: Administrator
Password: admin



GENESYS will access the repository specified during installation, which is on the local machine by default. If you would like to access a repository on another machine after installation, please reference the next section (Logging into a Remote Repository).


University Edition Installation Guide

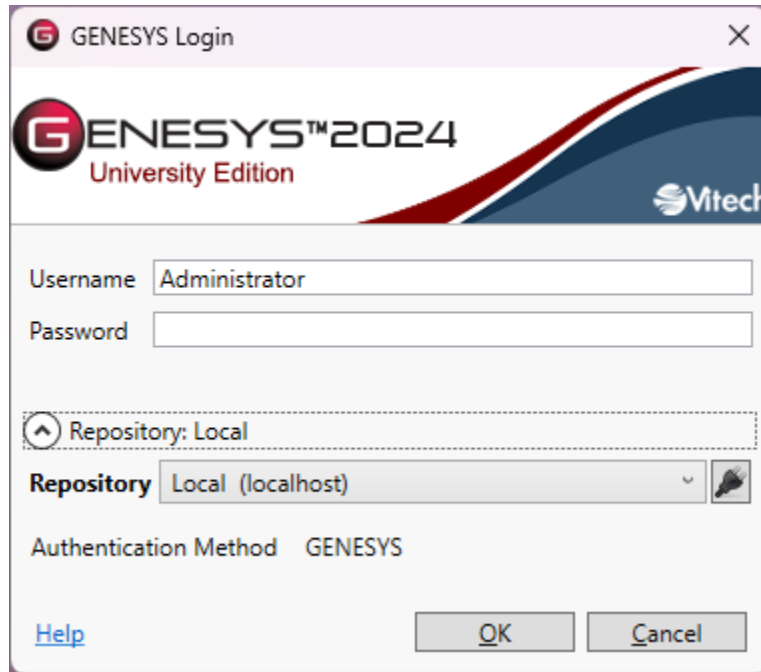


After logging in, new user accounts can be created and passwords may be changed via the User/Group Tool accessible via the Administrative Tools link at the bottom of the welcome screen.

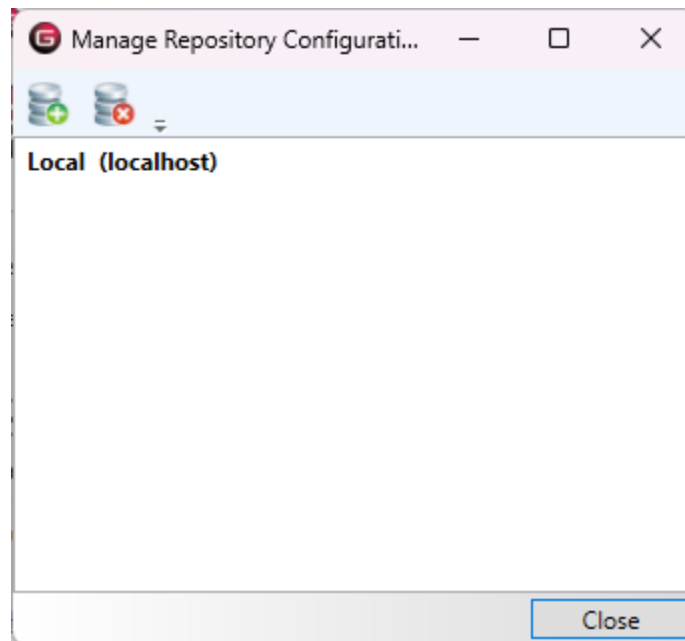
University Edition Installation Guide

Logging in to a Remote Repository

On the GENESYS University Edition login screen, click the **Arrow** next to Repository. This will reveal the Repository selection field. Click the **Plug** icon  to add a repository.



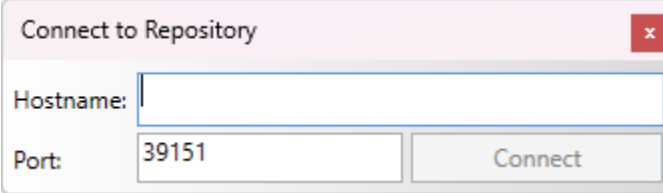
Click the **Add Repository**  icon.



Enter the machine name where the repository is hosted. This must be another instance of GENESYS 2024 University Edition.

University Edition Installation Guide

Leave the Port designation as the default unless you are certain that this setting was changed.



Connect to Repository

Hostname:

Port:

Click **Connect**, then **Close**. You can then select that repository from the drop-down list.

ADDITIONAL TIPS

The sections below provide useful information to support your use of GENESYS.

Check for Latest Service Packs

Periodically Vitech provides service packs to upgrade the GENESYS University Edition. Please check to ensure that you have the latest service pack by visiting the Software page at <https://www.vitechcorp.com/software-downloads/>.

GENESYS Training

Vitech offers ongoing training to help users learn more about using GENESYS in support of systems engineering and architecture frameworks, including:

- Model-Based Systems Engineering with GENESYS — You will learn the interfaces of GENESYS and how best to apply them to the management of system design. You will learn how the GENESYS .NET interface and capability allows you to intuitively create robust system models. You will build complete design models using the designer-friendly user interface.
- Fundamentals of Writing Reports in GENESYS — You will learn the intuitive and user-friendly reporting capability of the new GENESYS tool. You will craft custom reports from “scratch” as well as through basic templates. Your reports, created through GENESYS’ Visual Basic .NET reporting tools, will say what *you* need to say about *your* models. This course shows you the way.

GENESYS Help and Documentation

The GENESYS user reference guide is accessible within GENESYS using the Help icon in the upper-right-hand corner. If you prefer to navigate by volume, flip through the index, or simply perform an electronic search, the help tool will meet your needs.

Sample Solutions

The Samples directory within your GENESYS installation provides three sample projects. These files can be imported into GENESYS to view and manipulate.

You will also find two API Samples to demonstrate the use of the GENESYS API.

Disaster Prevention/Recovery

In GENESYS 2024 University Edition, your data is maintained by SQL Server. The SQL Server database files for the GENESYS local repository are located in the \ProgramData\Vitech\GENESYS 2024 University Edition\Data folder. These files are actively in use when the “GENESYS 2024 University Edition Services Host” service is running. At minimum, this service must be stopped before using standard file system backup utilities to archive the SQL Server database files. You should follow Microsoft’s recommendations for backup and recovery of SQL Server.

Should you have complete failure of the machine on which you have GENESYS 2024 installed and have backup files available, follow these steps to restore your data:

1. Install GENESYS 2024 University Edition on the desired machine.
2. Stop the service “GENESYS 2024 University Edition Services Host” (Genesys2024UniversitySvc),
3. Locate the archived files and save them to the C:\ProgramData\Vitech\GENESYS 2024 University Edition\Data, overwriting the blank files currently in that folder.
4. Start the service “GENESYS 2024 University Edition Services Host” (Genesys2024UniversitySvc).

University Edition Installation Guide

Uninstalling GENESYS

To remove GENESYS from your system, select **Add/Remove Programs** from the Windows control panel. Select GENESYS University Edition from the list of applications available to uninstall and click the **Add/Remove** button. Follow the instructions provided by the installer to remove the application.

Please note that this will not remove the repository itself as GENESYS repositories are maintained by SQL Server. These must be removed separately.

Reporting Problems / Making Product Suggestions

All customer observations and recommendations are valuable to us. If you should encounter a problem with the software (either an error, a deficiency, a feature that works in a manner other than you expected, or a problem with any associated documentation), please notify us via e-mail, phone, or fax as indicated below. Any information you can provide in your report regarding the hardware and software configuration of the host machine, the circumstances in which the problem occurred, conditions to reproduce the problem, and such test data as you can reasonably provide to assist Vitech in reproducing the problem would be greatly appreciated.

We hope that you enjoy the new capabilities of GENESYS 2024 University Edition!

APPENDIX

Prerequisites for Installation

GENESYS 2024 software requires that the Microsoft .NET Framework 4.8 be installed on the computer. This must be installed before running the GENESYS 2024 installers.

Most computers will already have this prerequisite installed. If you do not have this installer and run the GENESYS 2024 installers, you will be prompted with an alert of the need to install the prerequisite.

In this situation, if your computer has Internet access, our installer will obtain the installer for you. If you do not have Internet access on this computer, you'll need to retrieve the installer from another computer and install it separately.

Should you need to obtain and install Microsoft .NET Framework 4.8, you can access the installer and installation instructions here: <https://dotnet.microsoft.com/en-us/download/dotnet-framework/net48>.

THIS PAGE INTENTIONALLY BLANK



2270 Kraft Drive, Suite 1600
Blacksburg, Virginia 24060
+1 540 951 3322 | Fax: +1 540 951 8222
www.vitechcorp.com

Customer Support:
+1 540 951 3999 | support@vitechcorp.com