MICRO FOCUS

Virtual User Generator (VuGen)

Software Version: 2022-2022 R2

Installation Guide

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Welcome to VuGen

Welcome to the VuGen Installation Guide.

VuGen is a tool for creating virtual user (Vuser) scripts, primarily through recording. Vuser scripts emulate users without a graphical user interface by using direct function calls.

This guide describes how to install and set up VuGen.

VuGen Help Center

For context sensitive help within the LoadRunner Professional products, press F1 within a dialog box or use the Help menu.

You can access the product Help Centers on the web:

- https://admhelp.microfocus.com/lr/
- https://admhelp.microfocus.com/vugen/

You can also download and install local versions of the help from the **Download Help Centers** page.

To switch between online and local modes, select **Help > Help Center Options > Open Online** or **Open Locally**.

> **Note:**
>
> - To view the Help Center in Internet Explorer or within VuGen, you need to enable JavaScript (Active scripting) in your browser settings (**Tools > Options > Security > Internet > Custom Level**).
> - If the online Help Center is unavailable at the start of a VuGen application session, the **Open Online** option may be disabled during the whole session with that application.

VuGen components

VuGen installation includes the following components. For more information about the components, refer to the Virtual User Generator Help Center (select the relevant version):

- **Virtual User Generator (VuGen).** Micro Focus's tool for creating virtual user (Vuser) scripts, primarily through recording. Vuser scripts emulate users without a graphical user interface by using direct function calls.
- **TruClient.** Component for recording and developing test scripts for web-based applications.

Other components (such as the Citrix Agent) can be found in the installation package's **Additional Components** folder.

You can access the installation packages from the free trial page or by selecting your account on the Software Licenses and Downloads page.

You can also download VuGen, TruClient, LoadRunner Developer, VTS, Data Hub, and more, for free from AppDelivery Marketplace.

System requirements and prerequisites

This chapter includes:

System requirements

The system requirements necessary for running VuGen on a Windows system are listed in the Support Matrix.

For system requirements and installation instructions for Network Virtualization, see the Network Virtualization for LoadRunner Help (select the relevant version) . You can install Network Virtualization during the VuGen installation, or at a later time.

Prerequisite software for installation on Windows

Before installing VuGen, make sure the prerequisite software is installed on the VuGen machine. Some of the prerequisite software is automatically detected and installed by the installer; other prerequisite software must be installed manually.

- "Automatically detected and installed by the installer" below
- "Manual installation for Windows updates" on the next page

Automatically detected and installed by the installer

When you run the installation wizard, the wizard detects which prerequisite software is already installed on the machine and which software is missing. When you continue with the installation, all missing prerequisite software is installed.

The following prerequisite software must be installed:

- .NET Framework 4.8
- Microsoft Visual C++ Redistributable for Visual Studio 2015-2019 (x86 and x64)

> **Note:** Installation of .NET Framework 4.8 prompts an automatic restart. You then need to rerun the VuGen installation.

Manual installation for Windows updates

Before installing any of the VuGen components, make sure that the full set of Windows updates has been installed. If this was not done automatically, you must install them manually.

> **Note:** Before installing any of the Windows updates, disable UAC (User Account Control) and restart the computer. For details on how to disable UAC, see the Microsoft Windows documentation.

You can find the list of Windows updates in the Support Matrix.

Installation notes and limitations

> **Note:** See **Known issues** in the VuGen Help Center for additional notes and limitations.

Security review	We strongly recommend that you install VuGen components on dedicated machines that do not contain, or provide access to, sensitive information; and that you do a thorough security review of the network topology and access levels in your testing environment.
Permission requirements	The installation process for VuGen requires a full administrator account for all operating systems. After installation, VuGen can run under a standard user account (an administrator account is not required), with UAC and DEP enabled.
Running Java Vusers on Windows	OpenJDK 32-bit is no longer automatically installed with LoadRunner. To work with Java protocols, you need to manually install a supported version of the JDK. VuGen uses internal logic to automatically detect your JRE version. For details, see Set up the environment for Java protocols.

VuGen and UFT coexistence	If you install VuGen and UFT on the same machine, and then uninstall one of them, the remaining software program may not function correctly. **Resolution:** Run a Repair of the software program you want to use on the machine.
Custom certificates	When upgrading from version 12.55 or earlier, if you used custom certificates in your previous installation of LoadRunner, install them again when prompted for certificates during setup. Otherwise, the setup program will overwrite them using the defaults.
Network Virtualization	If you choose to install NV automatically (as part of VuGen installation), you must disable Windows SmartScreen before proceeding with the NV installation: Open HKEY_LOCAL_ MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Explorer in the Registry Editor, and change the Value data for **SmartScreenEnabled** to **Off**. **Note:** You do not need to disable SmartScreen when installing NV manually.
TruClient version conflict	After upgrading your TruClient installation, if you encounter any version conflict, check that the legacy TruClient registry key **TcWebIELauncher.exe**, has been removed. • In the Registry Editor, open **HKEY_LOCAL_ MACHINE\SOFTWARE\Microsoft\Internet Explorer\MAIN\FeatureControl\FEATURE_BROWSER_ EMULATION** and delete the key. • Or, run the command: ```"REG DELETE "HKEY_LOCAL_ MACHINE\SOFTWARE\Microsoft\Internet Explorer\MAIN\FeatureControl\FEATURE_BROWSER_ EMULATION" /v "TcWebIELauncher.exe" /f"```

Virtual environments	The architectures provided by virtualization vendors are rapidly evolving. VuGen is expected to function as designed in these changing environments, as long as the third-party vendor guarantees full compatibility of the virtualized environment with the VuGen-approved hardware requirements. If you follow the system requirements and support matrix to create the virtual machine, VuGen will work correctly.
	Working on top of a virtual machine may require access to the virtualization server hardware/monitoring environment, to ensure the virtualization server is not saturated; otherwise, this might obscure the virtual machine's measurements and lead to false results.

Installing VuGen

This chapter describes how to install VuGen on a Windows platform.

This chapter includes:

Installation workflow

Your LoadRunner Professional installation package includes the Setup wizard that guides you through the process of installing VuGen.

Installing VuGen on a Windows system involves the steps shown below:
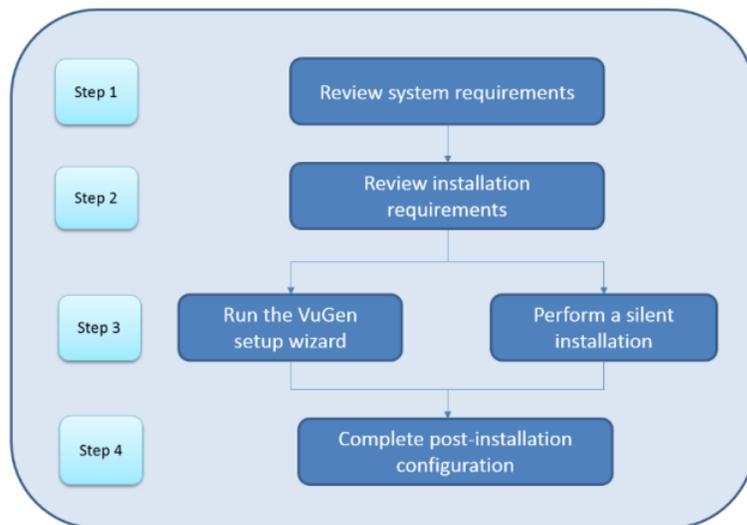
1. **Review system requirements and notes**
   - Make sure that your system meets the hardware and software requirements. For details, see "System requirements" on page 6.

   > ! **Prerequisite software:** When you run the VuGen Setup wizard, the wizard detects which prerequisite software is already installed on the machine and which software is missing. When you continue with the installation, all missing prerequisite software is installed. For details, see "Prerequisite software for installation on Windows" on page 6.

- Review the "Installation notes and limitations" on page 7.

2. **Review installation requirements**

   Before you begin the installation, make sure you meet the following installation requirements:

   - You must have full local administrative rights on the designated machine.
   - Installation must be performed at the destination machine. VuGen does not support installation via terminal service.
   - For the full list of components that can be installed on the same physical machine at the same time, see the Support Matrix.

   > **Note:** It is recommended that you close all antivirus applications before installing VuGen.

3. **Perform the installation**

   a. If you were working with an earlier VuGen version, review the upgrade instructions. For details, see "Upgrade VuGen" below.

   b. Run the Setup wizard to install VuGen on a Windows system. For details, see "Install VuGen" on the next page.

      Then run any patch installations if necessary.

   c. After you complete the VuGen installation, you can install a localized version to view the VuGen user interface in your local language. For details, see "Install a VuGen language pack" on page 17.

   > **Note:**
   >
   > - To perform a silent installation, see "Install VuGen silently" on page 14.
   > - VuGen installation on Windows includes OpenJDK 11, 32-bit.

Upgrade VuGen

VuGen is a full installation that can be installed over any VuGen installation (version 12.5x and later).

To upgrade all components in your Windows installation, follow the installation process as described in "Install VuGen" on the next page. The installation process detects the older version, and gives you the option to upgrade.

> **Note:** For silent upgrade, see "Install VuGen silently" on page 14.

Install VuGen

This section describes how to install VuGen using the Setup wizard.

For details on how to perform a silent installation, see "Install VuGen silently" on page 14.

To install VuGen:

1. Before installing:
   - Review the pre-installation information, including the system requirements and prerequisite software, described in "System requirements and prerequisites" on page 6.
   - If you plan to install Network Virtualization, make sure that your system meets the requirements, as described in the Network Virtualization for LoadRunner Help (select the relevant version). (You can install Network Virtualization during VuGen installation, or at a later time.)

     > **Note:** If you install Network Virtualization as part of VuGen installation, you may need to restart the machine after setup.

   - Make sure you have full, local administrative rights on the designated machine.
   - Make sure the Windows Update process is not running.

2. Disable UAC (User Account Control) on the installation machine. For details, refer to your Microsoft Windows documentation.

   Then reboot the machine. (Installation may fail if this is not done.)

3. To prevent DEP (Data Execution Prevention) from interfering with the installation, enable it for essential Windows programs and services only.

   For details on how to change DEP settings, refer to your Microsoft Windows documentation.

4. Run the **setup.exe** file in the root folder of the installation package.

   The VuGen installation program begins and displays the installation options.

5. Select the required installation option.

   From the installation menu page, select one of the following installation options:
   - **VuGen.** Installs a standalone version of VuGen (includes TruClient).
   - **Language Packs.** This option is available only when installing on native non-English operating systems. Enables you to install a patch for localized VuGen user interface, on top of the English version. For details, see "Install a VuGen language pack" on page 17.

- **Additional Components.** Opens the Additional Components folder located in the root folder of the installation package. For details of the additional components that you can install, see the **Advanced > Additional Components** section in the Virtual User Generator Help Center (select the relevant version).

6. Specific software, for example, Microsoft Visual C++, needs to be installed before you can install VuGen (see "Prerequisite software for installation on Windows" on page 6). If the prerequisite software is not already installed on your computer, a dialog box opens displaying the list of prerequisite programs that are required.

   Click **OK** to install the listed software before continuing with the VuGen installation. If you click **Cancel**, the VuGen Setup wizard exits because VuGen cannot be installed without the prerequisite software.

   > **Note:** After installing prerequisite software, VuGen may restart the machine. If that occurs, rerun **setup.exe**.

7. Perform the installation.

   The Setup wizard opens, displaying the Welcome page.

   Follow the instructions in the wizard to complete the installation.

   > **Note:**
   >
   > - The installation path cannot contain non-English characters.
   > - The default installation path is: **C:\Program Files (x86)\Micro Focus\LoadRunner**

8. After the installation is complete, you can choose to install Network Virtualization (NV).

   In the Setup wizard, select:

   - **Typical mode** for an automatic installation of the NV for Load Generator and VuGen component.
   - **Custom mode** to change the installation folder, data folder, and the port.

   For more details, see the installation section of the Network Virtualization for LoadRunner Help (select the relevant version).

9. If there is a patch available for the installed version:

   a. Run the patch installation file provided with the installation package.

   b. Follow the onscreen installation and deployment instructions.

> **Note:**
> - To repair the installation, run the **setup.exe** file located in the root directory of the VuGen installation package, select **LoadRunner Professional**, and then select the **Repair** option in the Setup wizard.
> - For a list of the components that were registered during setup, such as **DLL** and **OCX** files, see the **RegisteredComponents_Micro Focus Virtual User Generator.txt** file in the **build_info** folder of the installation.

Install VuGen silently

A silent installation is an installation that is performed without the need for user interaction. You use the command line to run the setup files. For details, see "Installation command line options" on the next page.

> **Note:**
> - Before you install VuGen, review the pre-installation information, including the system requirements and prerequisite software, described in "System requirements and prerequisites" on page 6.
> - All machines on which you install VuGen require administrator privileges.
> - Use standard MSI command line options to define installation properties. For example, use INSTALLDIR to specify an alternate installation folder.

To perform a silent installation of VuGen

1. Run one of the following commands from the command line:
   - To install VuGen:

   ```
   <Installation_package>\Standalone Applications\SetupVuGen.exe
   -s -sp"/s"
   ```

   - To install additional components:

   ```
   <Installation_package>\Additional Components\<setup_file_path>
   /s /a /s
   ```

2. If you are installing an upgrade, run the following command:

```
msiexec.exe /update <full path to msp file> [/qn] [/l*vx <full path to log file>]
```

The msp files are located in the installation package.

For details, see "Upgrade VuGen" on page 11.

Installation command line options

You can install VuGen or one of the additional components via the Package for the web (PFTW) files that are included with the LoadRunner Professional installation media. The installation files are located under the **Standalone Applications** or **Additional Components** folders on the installation media.

Double-click on the packaged file, or run it from the command line using the following options:

Option	Description
/s	Runs the installation in the background (silently), with no user interaction.
/e	Only extracts the installation files; does not run them.
/f	Specifies the path of a temporary folder for file extraction. For example: `/f "c:\my_temp_folder"` If you leave out this option, the default temporary folder is used.

Option	Description
/a	Allows you to pass parameters or properties to the autorun file, such as SetupVuGen.exe. The following properties are available: **INSTALLDIR="*your_path*".** Specifies the location where the application will be installed. **REBOOT_IF_NEED.** Default: 0 1: Reboots the machine after installation, if required. This is recommended if you include the installation of NV (Network Virtualization). 0: Does not reboot the machine after installation. **NVINSTALL** Default: 1 Empty string: Excludes the installation of the NV component. 1: Includes the installation of the NV component. **INSTALL_NV_MODE.** Default: 1 1: Sets the NV installation mode to **Typical**. 2: Sets the NV installation mode to **Custom**. **INSTALL_DIR="*your_path*".** Specifies a path for the installation. **IMPROVEMENTPROGRAM.** Default: 1 0: Disables the VuGen Improvement Program. 1: Enables the VuGen Improvement Program.

Note: Silent installation for VuGen and OneLG:

- **SetupVuGen.exe** and **SetupOneLG.exe** uses different install commands (see the examples below).

- If you need to insert a quotation mark character into the command line parameter, use two consecutive quotation marks.

Examples

The following commands silently run setup, and install the application in the specified folder. Where relevant, they also start the agent after installation:

- Examples for **SetupVuGen.exe** and **SetupOneLG.exe**:

```
SetupOneLG.exe -s -sp"/s INSTALLDIR=""C:\Program Files (x86)\Micro
Focus\LoadRunner OneLG"" IS_RUNAS_SERVICE=0 START_LGA=1
NVINSTALL=N"
```

```
SetupVuGen.exe -s -sp"/s INSTALLDIR=C:\VuGen"
```

- Examples for **other standalone applications**:

```
SetupAnalysis.exe /s /a /s INSTALLDIR="C:\Analysis"
```

```
SetupMIListener.exe /s /a /s INSTALLDIR="C:\MiListener"
```

```
SetupMoFW.exe /s /a /s INSTALLDIR="C:\MoFW"
```

```
SetupTruClient.exe /s /a /s INSTALLDIR="C:\TCSA"
```

Install a VuGen language pack

The language packs enable you to view the VuGen user interface in your local language. You install the language pack from the LoadRunner Professional installation package.

For a list of supported languages, see the Support Matrix.

The language packs are supported for native non-English operating systems only.

> **Important:** The native language of the operating system must be the same as the language pack you are installing. For example, the Spanish language pack must be installed on a machine with a native Spanish operating system.

To install a language pack:

1. Make sure that VuGen in English is already installed.
2. In the root folder of the LoadRunner Professional installation package, run **setup.exe**. The LoadRunner Professional installation program begins and displays the installation options.

3. Click **Language Packs**. The Language Packs folder in the installation package opens.

4. Navigate to the folder for the language and component you want to install and run the installation file. For example, to install the French language pack on a VuGen standalone machine, the path is **..\Language Packs\French\VugenSA\Vugen_FRA.msp**.
Follow the online instructions.

Send Us Feedback

Let us know how we can improve your experience with the Installation Guide.
Send your email to: docteam@microfocus.com