RTX64 4.5.5 SDK

INSTALL GUIDE

IntervalZero

RTX64

RTX64 4.5.5 SDK Install Guide

IZ-DOC-X64-0246-R6

IntervalZero

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Requirements

This chapter describes system requirements for RTX64 Software Development Kit (SDK).

NOTE: This SDK installation does not include RTX64 Runtime. To run RTSS applications, you must install the separate Runtime component. See the *RTX64 Runtime Install Guide* for information on installing RTX64 Runtime.

Software Requirements

This section lists software requirements for RTX64 4.5.5.

Operating System Requirements

RTX64 SDK is supported on any 64-bit operating system.

NOTE: RTX64 4.5.5 SDK cannot be installed on a 32-bit operating system. Attempts to do so will result in the following RTX64 error: "IntervalZero RTX64 4.5 SDK is only supported on 64-bit machines."

Microsoft Visual Studio Requirements

RTX64 SDK requires that you have one of the following versions of Microsoft Visual Studio installed if you wish to build or debug RTX64 programs with the Visual Studio IDE:

- **Visual Studio 2022 LTSC** (Enterprise, Professional, and Community editions supported)

IMPORTANT! The RTX64 SDK requires the **Desktop development with C++** Visual Studio 2022 workload.

If this workload is not currently installed for Visual Studio 2022, you must manually install it using the appropriate Visual Studio installer file (`vs_<edition>.exe`). For example, `vs_professional.exe`. To do this, follow the steps below:

1. Browse for and open the Visual Studio 2022 installer file (`vs_<edition>.exe`).
2. Under **Workloads / Windows**, select **Desktop development with C++**.
3. Under **Summary**, make sure that the optional feature of this workload **MFC and ATL support (x86 and x64)** is selected.
4. Click **Install**.
5. After the new workload is installed, click **Launch**.

NOTE: If the above workload is not installed, projects and samples created with the RTX64 application templates will not build.

IMPORTANT! RTX64 application templates require the Windows 10 SDK version 2004 (10.0.19041.0) or later, which is included in the **Desktop development with C++** Visual Studio 2022 workload.

- **Visual Studio 2019** (Enterprise, Professional, and Community editions supported)

IMPORTANT! RTX64 SDK requires the **Desktop development with C++** Visual Studio 2019 workload.

If this workload is not currently installed for Visual Studio 2019, you must manually install it using the appropriate Visual Studio installer file (`vs_<edition>.exe`). For example, `vs_professional.exe`. To do this, follow the steps below:

1. Browse for and open the Visual Studio 2019 installer file (`vs_<edition>.exe`).
2. Under **Workloads / Windows**, select **Desktop development with C++**.

3. Under **Summary**, make sure that the optional feature of this workload **MFC and ATL support (x86 and x64)** is selected.
4. Click **Install**.
5. After the new workload is installed, click **Launch**.

NOTE: If the above workload is not installed, projects and samples created with the RTX64 application templates will not build.

IMPORTANT! The RTX64 application templates require the Windows 10 SDK version 1903 (10.0.18362.x) or later, which is not included in the Visual Studio 2019 installation by default. You must manually select Windows 10 version 1903 (10.0.18362.x) or later during installation of Visual Studio 2019.

IMPORTANT! The IntervalZero Real-Time Debugger component requires these Microsoft Visual C++ 2015-2019 Redistributables for Real-Time debugging to work with Visual Studio 2019:

• Microsoft Visual C++ 2015-2019 Redistributable (x64)-14.48.29910

• Microsoft Visual C++ 2015-2019 Redistributable (x86)-14.48.29910

These redistributables are packaged with the **RTX64_4.5.5_SDK_Setup.exe** file.

Alternatively, you can download them from Microsoft at https://visualstudio.microsoft.com/downloads/

- **Visual Studio 2017** (Enterprise, Professional, and Community editions supported)

IMPORTANT! RTX64 SDK requires the **Desktop development with C++** Visual Studio 2017 workload.

If this workload is not currently installed for Visual Studio 2017, you must manually install it using the appropriate Visual Studio installer file (`vs_<edition>.exe`). For example, `vs_professional.exe`. To do this, follow the steps below:

1. Browse for and open the Visual Studio 2017 installer file (`vs_<edition>.exe`).
2. Under **Workloads / Windows**, select **Desktop development with C++**.
3. Under **Summary**, make sure that the optional feature of this workload **MFC and ATL support (x86 and x64)** is selected.
4. Click **Install**.
5. After the new workload is installed, click **Launch**.

NOTE: If the above workload is not installed, projects and samples generated with the RTX64 application templates will not build.

IMPORTANT! The RTX64 application templates require the Windows 8.1 SDK, which is not included in the Visual Studio 2017 installation by default. You must manually select the Windows 8.1 SDK option during installation of Visual Studio 2017.

IMPORTANT! The IntervalZero Real-Time Debugger component requires these Microsoft Visual C++ 2015-2019 Redistributables for Real-Time debugging to work with Visual Studio 2017:

• Microsoft Visual C++ 2015-2019 Redistributable (x64)-14.48.29910

• Microsoft Visual C++ 2015-2019 Redistributable (x86)-14.48.29910

These redistributables are packaged with the **RTX64_4.5.5_SDK_Setup.exe** file.

Alternatively, you can download them from Microsoft at
https://visualstudio.microsoft.com/downloads/

See the TechNote *Unable to Debug RTSS Applications using the IntervalZero Real-Time Debugger with Visual Studio 2017* on the Support Site for more information.

- **Visual Studio 2015** (Ultimate, Premium, Pro, and Community editions supported)

> **IMPORTANT!** A *Typical* installation of Visual Studio 2015 does not include the Visual C++ programming language required by the RTX64 project wizard. If the Visual C++ feature is not installed, the RTX64 project wizard fails with an exception. You can add the Visual C++ feature to Visual Studio 2015 via Programs and Features in the Windows Control Panel.

> **IMPORTANT!** The IntervalZero Real-Time Debugger component requires these Microsoft Visual C++ 2015-2019 Redistributables for Real-Time debugging to work with Visual Studio 2015:
>
> • Microsoft Visual C++ 2015-2019 Redistributable (x64)-14.48.29910
>
> • Microsoft Visual C++ 2015-2019 Redistributable (x86)-14.48.29910
>
> These redistributables are packaged with the **RTX64_4.5.5_SDK_Setup.exe** file.
>
> Alternatively, you can download them from Microsoft at https://visualstudio.microsoft.com/downloads/

> **NOTE:** Visual Studio 2015 support has been deprecated and will be removed in a future release.

WinDbg Extension Requirements

RTX64 WinDbg Extension requires the following:

- **Windows Driver Kit (WDK)** - **Debugging Tools for Windows (x64)**. You can download WinDbg and related documentation from this website: https://docs.microsoft.com/en-us/windows-hardware/drivers/debugger/debugger-download-tools

> **NOTE:** RTX64 supports 64-bit WinDbg version 6.11.001.404 and above.

Microsoft .NET Support

RTX64 supports the following versions under .NET Standard 2.0:

.NET Implementation	Version Support
.NET and .NET Core	2.0, 2.1, 2.2, 3.0, 3.1, 5.0, 6.0, 7.0
.NET Framework	4.6.1, 4.6.2, 4.7, 4.7.1, 4.7.2, 4.8, 4.8.1

NOTE: While NuGet considers .NET Framework 4.6.1 as supporting .NET Standard 1.5 through 2.0, there are several issues with consuming .NET Standard libraries built for those versions from .NET Framework 4.6.1 projects.

NOTE: RTX64 does not support implementations of .NET Standard 2.0 that involve multiplatform support.

NOTE: When building an application using .NET 6.0, RtUtilityManaged.dll and MessageBusManaged.dll must be provided in the project. These DLLs can be found in the following directory: `C:\Program Files\IntervalZero\RTX64 SDK\4.5\bin`

NOTE: When building an application using .NET Framework, Microsoft.Win32.Registry.dll may need to be provided in the project. This DLL can be found in the following directory: `C:\Program Files\IntervalZero\RTX64 SDK\4.5\bin`

Administrator Privileges

Administrator privileges are required for installing and uninstalling the RTX64 SDK product.

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Installation

Before You Begin

Before you begin the installation, do the following:

- Verify that your configuration meets the requirements described earlier in this document.
- Ensure that you have administrator privileges on the system.
- RTX64 4.x SDK cannot be installed on a system with a 3.x version of RTX64 Runtime. If a 3.x version of RTX64 Runtime is installed on your machine, you must uninstall it before you install RTX64 4.x SDK.
- Install Microsoft Visual Studio (see Software Requirements for supported versions). This is required if you plan to use supported features.

  IMPORTANT! A *Typical* installation of Visual Studio 2022, 2019, or 2017 does not include the Visual C++ programming language required by the RTX64 project wizard. If the Visual C++ feature is not installed, the RTX64 project wizard fails with an exception. You can add the Visual C++ feature to Visual Studio 2022/2019/2017 via Programs and Features in the Windows Control Panel.

- Exit all Windows programs, including any open instances of Visual Studio.

Installation Instructions

NOTE: When upgrading from one major RTX64 SDK version to another, you will not be able to cancel installation once it begins.

About Multiple SDK Versions

Multiple major versions of RTX64 SDK can be installed on a system at one time. If you have a pre-RTX64 4.x version of the SDK already installed, installing a new version will not uninstall the old version. Each major version of the SDK has a specific environment variable. For instance, the environment variable...

- *RTX64SDKDir4* indicates the pathname of the directory containing RTX64 4.x SDK.
- *RTX64SDKDir3* indicates the pathname of the directory containing RTX64 3.x SDK.
- *RTX64SDKDir2* indicates the pathname of the directory containing RTX64 2014 SDK.
- *RTX64SDKDir* indicates the pathname of the directory containing RTX64 2013 SDK

For more information, see System Modifications During Installation.

About VSIX Packages

RTX64 SDK installs the VSIX packages for Visual Studio 2022, 2019, 2017, and 2015. *Note that installation of VSIX packages can take a considerable amount of time.*

For more information on VSIX packages, see VSIX Packages Installed with the RTX64 SDK.

TO INSTALL RTX64 SDK:

1. Download the zip file `RTX64_4.5.5_SDK_Setup.zip` from the IntervalZero Customer Center.
2. Extract the contents of the zip file.
3. Double-click the self-extracting executable `RTX64_4.5.5_SDK_Setup.exe`.
4. Click **Next** in the IntervalZero RTX64 installation Welcome window.

5. Read the End User License Agreement, select **I accept the terms of the license agreement** and then click **Next**.
6. Optionally, on the Destination Folder screen, choose a destination location other than the default: `C:\Program Files\IntervalZero\RTX64 SDK\4.5`.
7. Click **Next** in the Destination Folder screen.
8. In the Custom Setup screen, select the components you want to install, and then click **Next**.
9. In the Ready to Install the Program screen, click **Install**.
10. Click **Finish** in the installation Completed screen.
11. Activate your product. See Product Activation. If you plan to also install RTX64 Runtime, you can skip this step and activate the SDK later when you activate the Runtime.

Product Activation

The Activation dialog appears once RTX64 SDK has been successfully installed. You must activate your RTX64 SDK product through this dialog before you can build a Real-time application that can be run.

NOTE: Licenses for RTX64 3.x and previous versions will not work with RTX64 4.5. You must purchase a new license to activate RTX64 4.5.

NOTE: RTX64 4.5 does not support standard dongles. Only small form factor dongles can be used.

This warning symbol appears in the Activation and Configuration utility whenever an issue is encountered. When the warning symbol appears, hover the mouse over it for more information.

You can activate your RTX64 product components to a specific machine or IntervalZero-provided dongle.

Activating Product Components to a Machine

Follow the appropriate steps below to license RTX64 components to a specific machine.

NOTE: The steps needed to activate components will depend on whether the machine is connected to the Internet.

TO ACTIVATE RTX64 PRODUCT COMPONENTS TO A MACHINE:

1. Launch the **RTX64 Activation and Configuration** utility from **Start > All Programs > RTX64 4.5 SDK > RTX64 Activation and Configuration**. The product components activated by your current key are indicated by a check mark.
2. Choose the appropriate activation option:

	Activate over the network	Activate immediately using a valid activation key. This option requires a network connection with access to the IntervalZero License Server.

	Generate a fingerprint file	Create a fingerprint file with a valid activation key which you can then convert to a license file and import using the Activate with a license file option.
	Activate with a license file	Activate by importing a valid license file.

Activate Over the Network

Use this option to activate immediately using a valid activation key.

NOTE: This option requires a network connection with access to the IntervalZero License Server.

TO ACTIVATE OVER THE NETWORK:

1. Click **Activate over the network**.

2. Make sure your machine is connected to the Internet with access to the IntervalZero License Server.

Network connection established	Unable to establish a network connection
Continue with activation	Make sure all network cables are plugged in and click the Network icon to refresh. If a network connection cannot be established, you can do one of the following: • Try to configure a Proxy Server. • Follow the steps under Activate with a fingerprint file.

3. Enter a valid activation key.

> **NOTE:** Your activation key is in the email you received from IntervalZero when you purchased RTX64.

4. Click **Activate**. The product components activated by this key are added to the Components box on the right side of the Activation and Configuration dialog.

Configuring a Proxy Server

Follow the steps below to configure a proxy server. You may need to do this if a network connection cannot be established.

TO CONFIGURE A PROXY SERVER:

1. Click **Configure proxy server**.

2. Provide the requested settings:
   - Server
   - Port
   - User Name
   - Password

> **NOTE:** This information can be provided by your IT department.

3. Click **OK**.

Generate a Fingerprint File

Use this option to create a fingerprint file with a valid activation key which you can then import using the Activate with a license file option.

TO GENERATE A FINGERPRINT FILE:

1. Click **Activate with a fingerprint file**.

2. Enter a valid activation key and then click **Save As**.

> **NOTE:** Your activation key is in the email you received from IntervalZero when you purchased RTX64.

3. In the **Save As** dialog, name the file `fingerprint.rfp`. By default, the file will be saved to the desktop.
4. Navigate to the desktop, and then copy and paste the file `fingerprint.rfp` to an external device.
5. Connect the device to a machine with Internet connectivity.
6. Launch a web browser and navigate to http://Activation.IntervalZero.com.
7. Browse for and open the file `fingerprint.rfp`.
8. Click **Activate** to generate a license (`.lic`) file.
9. Click **Save** if your browser prompts you to save the license file. Some browsers automatically save the downloaded license file without prompting.
10. Copy the file `License.lic` to the external device and transfer it to the machine on which RTX64 is installed.
11. Activate with a license file (see below).

> **NOTE:** Once a fingerprint file is saved, the **Activate with a license file** section expands automatically.

Activate with a License File

Use this option to activate by importing a valid license file, such as a license file created from a fingerprint file.

TO ACTIVATE WITH A LICENSE FILE:

1. Click **Activate with a license file**.

2. Click **Import...** and then browse for and open the file `License.lic`.

Activating Product Components to a Dongle

This topic walks you through the steps required to activate RTX64 product components to an IntervalZero-provided dongle. This is a small form factor dongle on which the license resides.

NOTE: RTX64 4.5.5 does not support standard dongles. Only small form factor dongles can be used.

NOTE: The steps required to activate the components will depend on whether the machine is connected to the Internet.

Activation Options

You have three options when purchasing an IntervalZero-provided dongle and a product license at the same time:

- **Option 1 (default)** – IntervalZero activates the dongle for you when you purchase the software and a small form factor dongle. Simply plug in the dongle to use RTX64.
- **Option 2** – Request that IntervalZero not activate the dongle for you when you purchase the software and a small form factor dongle. You will then need to activate the product to the dongle yourself, following the steps below.

- **Option 3** – Use an existing small form factor dongle. You will need to activate the product the dongle yourself, following the steps below.

NOTE: You can also license RTX64 components to an IntervalZero-provided dongle using the Dongle Activation Utility, which allows you to activate licensed components on other machines similar to the pre-activation service you can request from IntervalZero. You can download the Dongle Activation Utility from the IntervalZero Support Site.

IMPORTANT! You cannot license RTX64 components to a dongle when more than one dongle is connected to the machine.

Follow the appropriate steps below to license RTX64 components to an IntervalZero-provided dongle. If you have a dongle that has already been activated, jump to step Using a Pre-Activated Dongle.

TO ACTIVATE RTX64 PRODUCT COMPONENTS TO A DONGLE:

1. Launch the **RTX64 Activation and Configuration** utility from **Start > All Programs > RTX64 4.5 SDK > RTX64 Activation and Configuration**.
2. Check the status of the dongle icon in the **Activation and Configuration** dialog:

		
Dongle connected and active	**Dongle not connected / not active**	**Multiple dongles detected**
Choose the appropriate activation option to lock the RTX64 component(s) to the dongle.	Make sure it is securely connected to your machine. If the dongle still isn't recognized, the RTX64 component(s) will be locked to the machine. Choose the appropriate activation option only if you want to license to the machine.	You cannot license RTX64 components to a dongle when more than one dongle is connected to the machine. Remove all additional dongles until there is only one connected to the machine.

IMPORTANT! Once components are locked to a dongle, that dongle must be connected to use RTX64 components on that machine.

3. Choose the appropriate activation option:

	Activate over the network	Activate immediately using a valid activation key. This option requires a network connection with access to the IntervalZero License Server.
	Generate a fingerprint file	Create a fingerprint file with a valid activation key which you can then convert to a license file and import using the Activate with a license file option.
	Activate with a license file	Activate by importing a valid license file.

Activate Over the Network

Use this option to activate immediately using a valid activation key.

NOTE: This option requires a network connection with access to the IntervalZero License Server.

TO ACTIVATE OVER THE NETWORK:

1. Click **Activate over the network**.

2. Make sure your machine is connected to the Internet with access to the IntervalZero License Server.

 **Network connection established**	 **Unable to establish a network connection**
Continue with activation	Make sure all network cables are plugged in and click the Network icon to refresh. If a network connection cannot be established, you can do one of the following: • Try to configure a Proxy Server. • Follow the steps under Activate with a fingerprint file.

3. Enter a valid activation key.

> **NOTE:** Your activation key is in the email you received from IntervalZero when you purchased RTX64.

4. Click **Activate**. The product components activated by this key are added to the Components box on the right side of the Activation and Configuration dialog.

> **IMPORTANT!** Once components are locked to a dongle, that dongle must be connected to use RTX64 components on that machine.

Configuring a Proxy Server

Follow the steps below to configure a proxy server. You may need to do this if a network connection cannot be established.

TO CONFIGURE A PROXY SERVER:

1. Click **Configure proxy server**.

2. Provide the requested settings:
    - Server
    - Port
    - User Name
    - Password

    NOTE: This information can be provided by your IT department.

3. Click **OK**.

Generate a Fingerprint File

Use this option to create a fingerprint file with a valid activation key which you can then import using the Activate with a license file option.

TO GENERATE A FINGERPRINT FILE:

1. Click **Generate a fingerprint file**.

2. Enter a valid activation key and then click **Save As**.

    NOTE: Your activation key is in the email you received from IntervalZero when you purchased RTX64.

3. In the **Save As** dialog, name the file `fingerprint.rfp`. By default, the file will be saved to the desktop.
4. Navigate to the desktop and then copy and paste the file `fingerprint.rfp` to an external device.

5. Connect the device to a machine with Internet connectivity.
6. Launch a web browser and navigate to http://Activation.IntervalZero.com.
7. Browse for and open the file `fingerprint.rfp`.
8. Click **Activate** to generate a license (`.lic`) file.
9. Click **Save** if your browser prompts you to save the license file. Some browsers automatically save the downloaded license file without prompting.
10. Copy the file `License.lic` to the external device and transfer it to the machine on which RTX64 is installed.
11. Activate with a license file (see below).

NOTE: Once a fingerprint file is saved, the **Activate with a license file** section expands automatically.

Activate with a License File

Use this option to activate by importing a valid license file, such as a license file created from a fingerprint file created by the above option.

TO ACTIVATE WITH A LICENSE FILE:

1. Click **Activate with a license file**.

2. Click **Import...**, then browse to the file `License.lic`.

IMPORTANT! Once components are locked to a dongle, that dongle must be connected to use RTX64 components on that machine.

Using a Pre-Activated Dongle

If the dongle you have received has been pre-activated, follow the steps below:

TO USE A DONGLE THAT HAS ALREADY BEEN ACTIVATED:

1. Plug in the dongle (the license file is already on the dongle).
2. Connect the dongle to a USB port on the machine.
3. Open the **Activation and Configuration** dialog. This dialog appears once RTX64 has been installed. You can also launch it from **Start > All Programs > RTX64 4.5 SDK > RTX64 Activation and Configuration**.
4. Make sure the Activation and Configuration utility recognizes the dongle:



Dongle connected and active	**Dongle not connected / not active**	**Multiple dongles detected**
Choose the appropriate activation option to lock the RTX64 component(s) to the dongle.	Make sure it is securely connected to your machine. If the dongle still isn't recognized, the RTX64 component(s) will be locked to the machine. Choose the appropriate activation option only if you want to license to the machine.	You cannot license RTX64 components to a dongle when more than one dongle is connected to the machine. Remove all additional dongles until there is only one connected to the machine.

Proceed once you see the Dongle Active icon.

> **NOTE:** The license is locked to the dongle. The dongle must be connected to the machine to use RTX64 components.

VSIX Packages Installed with RTX64 SDK

RTX64 SDK installs the following VSIX packages to the folder `%RTX64SDKDir4%\VSExtensions`:

- `RTX64VSSupport2022.vsix` – IntervalZero Real-Time Debugger and templates for creating RTSS applications and RTDLLs for Visual Studio 2022 (requires Visual Studio 2022 to be selected in the SDK installer)
- `RTX64VSSupport.vsix` – IntervalZero Real-Time Debugger and templates for creating RTSS applications and RTDLLs for Visual Studio 2019 and 2017 (requires Visual Studio 2019 or 2017 to be selected in the SDK installer)
- `RtBaseDebugMonitorVs2015.vsix` – IntervalZero Real-Time Debugger for Visual Studio 2015 (requires Visual Studio 2015 to be selected in the SDK installer)
- `RTXProjectWizard.vsix` – Templates for creating RTSS applications and RTDLLs for Visual Studio 2015 (requires Visual Studio 2015 to be selected in the SDK installer)

If you choose to install Visual Studio Support 2015, 2017, 2019, or 2022, you can run the corresponding RTX64 VSIX package to install its functionality in Visual Studio without having to re-install RTX64 SDK in its entirety. This is typically useful in the scenario where support is needed for a supported version of Visual Studio that was installed after RTX64 SDK was installed.

TO INSTALL THE REAL-TIME DEBUGGER AND TEMPLATES FOR VISUAL STUDIO 2022:

Run the VSIX package `RTX64VSSupport2022.vsix`.

TO INSTALL THE REAL-TIME DEBUGGER AND TEMPLATES FOR VISUAL STUDIO 2019 AND 2017:

Run the VSIX package `RTX64VSSupport.vsix`.

TO INSTALL THE REAL-TIME DEBUGGER FOR VISUAL STUDIO 2015:

Run the VSIX package `RtBaseDebugMonitorVs2015.vsix`.

TO INSTALL TEMPLATES FOR CREATING RTSS APPLICATIONS AND RTDLLS FOR VISUAL STUDIO 2015:

Run the VSIX package `RTXProjectWizard.vsix`.

NOTE: When multiple major version RTX64 SDKs are installed (for example, 3.x SDK and 4.x SDK), uninstalling the older major version RTX64 SDK removes all the RTX64 VSIX extension(s) from Visual Studio. To restore them, open File Explorer and navigate to `%RTX64SDKDir4%\VSExtensions`, and then manually install the appropriate VSIX package(s).

Uninstalling

Follow the steps below to uninstall the RTX64 SDK.

STEPS:

1. Close Microsoft Visual Studio if it is open.
2. Navigate to the **Windows Control Panel**.
3. Under *Programs*, click **Uninstall a Program**.
4. Select the **RTX64 4.5 SDK** program and click **Uninstall**.
5. Click **Yes** to confirm.
6. Click **Finish** once the RTX64 SDK has been successfully uninstalled.

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Installing RTX64 SDK from the Command Line

The silent installer provides the ability to install RTX64 SDK from the command line. This makes it possible to install RTX64 SDK within another product installation.

Please note the following information before you begin:

- If a previous major version of RTX64 is already installed on the system, RTX64 4.5.5 SDK will be installed alongside the previous version(s).
- **Administrator privileges are required** — Installation must be done from an account that has administrator privileges.
- Verify that your configuration meets the requirements described earlier in this document.
- Ensure that you have administrator privileges on the system.
- RTX64 4.x SDK cannot be installed on a system with a 3.x version of RTX64 Runtime. If a 3.x version of RTX64 Runtime is installed on your machine, you must uninstall it before you install RTX64 4.x SDK.
- Install Microsoft Visual Studio (see Software Requirements for supported versions). This is required if you plan to use supported features.

> **IMPORTANT!** A *Typical* installation of Visual Studio 2022, 2019, or 2017 does not include the Visual C++ programming language required by the RTX64 project wizard. If the Visual C++ feature is not installed, the RTX64 project wizard fails with an exception. You can add the Visual C++ feature to Visual Studio 2022/2019/2017 via Programs and Features in the Windows Control Panel.

- Exit all Windows programs, including any open instances of Visual Studio.

Installing RTX64 SDK Silently

You can install RTX64 SDK silently using a response file. The response file contains information on the data and system customizations selected by the user at run time.

IntervalZero-Provided Response File

IntervalZero provides a default response file for silent installation of RTX64 SDK, available from the ResponseFiles folder.

- `RTX64_4.5.5_SDK_Install_Response_File.iss` – installs the RTX64 4.5.5 SDK product to the default location and includes all features.

Creating a Custom Response File

Follow these instructions to create a new response file called `Setup.iss`. This file is similar to an INI file.

TO CREATE A NEW RESPONSE FILE:

Run this command:

```
RTX64_4.5.5_SDK_Setup.exe /r
```

This launches the RTX64 SDK installer, records the selections and customizations you make, and saves the data to a custom .iss file called `Setup.iss` in the system's Windows folder.

TO SPECIFY A NEW NAME AND LOCATION:

To specify an alternative response file name and location, use the */f1* option.

For example, to create a response file named `RTX64SDK.iss` in the `C:\temp` directory, you would run:

```
RTX64_4.5.5_SDK_Setup.exe /r /f1”C:\temp\RTX64SDK.iss”
```

TO CUSTOMIZE FEATURES:

The sections of a response file must be ordered as follows:

1. Dialog Sequence Section
2. Dialog Data Sections (one per dialog)

Data entries consist of <name=value> pairs, as in the following example:

```
Dlg0={E3CA44E6-4DF4-46D7-8838-7EC581F03373}-SdWelcome-0
```

For more information on manually creating a response file, visit https://community.flexera.com/t5/InstallAnywhere-Knowledge-Base/How-to-Create-Response-File-to-Be-Used-as-Silent-Install/ta-p/3530

Installing with a Response File

TO SILENTLY INSTALL WITH THE INTERVALZERO-PROVIDED DEFAULT RESPONSE FILE:

Run `RTX64_4.5.5_SDK_Setup.exe /s /f1"<path to the ResponseFiles folder>\RTX64_4.5.5_SDK_Install_Response_File.iss"`

TO SILENTLY INSTALL WITH A CUSTOM RESPONSE FILE:

Run `RTX64_4.5.5_SDK_Setup.exe /s /f1"<path to your custom response file>"`

For example:

```
RTX64_4.5.5_SDK_Setup.exe /s /f1"C:\temp\RTX64SDK.iss"
```

NOTE: The InstallShield icon appears on the system Task Bar during silent installation.

Log Files

When running an RTX64 installation in silent mode (using the */s* option), the log file `Setup.log` is created in the same directory as the response file. To specify an alternative log file location and/or file name, use the */f2* option.

For example:

```
RTX64_4.5.5_SDK_Setup.exe /s /f2"C:\Setup.log"
```

Uninstalling Using the Command Line

You can uninstall RTX64 SDK silently using a response file. The response file contains information on the data and system customizations selected by the user at run time.

IntervalZero-Provided Response File

IntervalZero provides a default response file for silent uninstall of RTX64 SDK, available from the ResponseFiles folder.

- `RTX64_4.5.5_SDK_Uninstall_Response_File.iss` – uninstalls RTX64 4.5.5 SDK and reboots the system.

Uninstalling with a Response File

TO SILENTLY UNINSTALL WITH THE INTERVALZERO-PROVIDED DEFAULT RESPONSE FILE:

Run `RTX64_4.5.5_SDK_Setup.exe /s”<path to the ResponseFiles folder>\RTX64_4.5.5_SDK_Uninstall_Response_File.iss"`

NOTE: The system will reboot after RTX64 4.5.5 SDK is silently uninstalled using the IntervalZero-provided response file. If you want to suppress the reboot, create an alternative response file. See *Creating a Custom Response File* earlier in this guide.

TO SILENTLY UNINSTALL WITH A CUSTOM RESPONSE FILE:

Run `RTX64_4.5.5_SDK_Setup.exe /s /f1”<path to your custom response file>"`

For example:

```
RTX64_4.5.5_SDK_Setup.exe /s /f1”C:\temp\RTX64SDK.iss"
```

NOTE: The InstallShield icon appears on the system Task Bar during silent installation.

Next Steps

- Once you've successfully installed RTX64, we recommend you review the RTX64 product Help available from the Start menu.
    - *Getting Started* – The RTX64 Getting Started section of the product Help walks you through the necessary steps to create an .rtss application using the RTX64 Application Wizard and debug the application using debug functionality in Microsoft Visual Studio.

Appendix A

System Modifications during Installation

The following table describes the system modifications that are made during the RTX64 SDK installation.

System Modifications During Installation

Name	Description
RTX64SDKDIR4	This environment variable contains the path to the directory containing RTX64 4.x SDK. It is created by RTX64 4.x and will not exist if the customer does not have the RTX64 4.x SDK installed.

Support

For help with RTX64, contact IntervalZero Technical Support by phone or access the online support resources available at https://www.intervalzero.com/en-support/en-customer-service/

Contacting Technical Support by Phone

NOTE: If you are a customer who purchased an IntervalZero product through a third-party reseller, contact the reseller for support.

Location	Number	Hours
United States	1-781-996-4481 At the prompt, press 3 for Support.	Monday - Friday, 8:30 a.m. – 5:30 p.m. US Eastern Time (GMT-500), excluding holidays.
R.O.C. Taiwan	+ 886-2-2556-8117	Monday - Friday, 9:00 a.m. – 5:00 p.m. Taipei Standard Time (GMT+8), excluding holidays.

Before Calling Technical Support

Please have the following information ready before calling IntervalZero Technical Support:

- **Your Support ID**: Customers who purchase direct support receive an e-mail address and password for accessing the IntervalZero Customer Support Portal.
- **The Version Number of Your RTX64 Software**: You can find the RTX64 version number on the RTX64 Control Panel home screen (**Start > RTX64 4.5.5 Runtime > RTX64 Control Panel**).

NOTE: Make sure you have a valid maintenance contract.

Online Resources

Visit https://www.intervalzero.com/en-support/en-customer-service/ to log in to the Customer Support Portal (requires valid credentials), access online product Help, and view Support and Lifecycle policies and Product Release Notices.

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