

RTX 2016 with Update 3 Runtime

SILENT INSTALL GUIDE

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Silent Install Guide for RTX 2016 with Update 3

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About the RTX Runtime Silent Installer

This document describes the RTX 2016 with Update 3 Runtime Silent Installer that provides a command line interface to the RTX Runtime product installation. The command line interface can be invoked from the command line or used within your own product installation process so as not to require user interaction during the installation process.

System Requirements

The Runtime Silent Installer has the same system requirements as RTX 2016 with Update 3 Runtime. See the *RTX 2016 with Update 3 Install Guide* for complete details.

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Installing RTX Runtime from the Command Line

The silent installer provides the ability to install the RTX Runtime from the command line. This makes it possible to install the RTX Runtime within another product installation. Take note of the following information before you begin.

- **Administrator privileges are required**— Installation must be done from an account that has administrator privileges. This can be done in one of several ways:
 - From any version of Windows:
 - a. In the Run As window, select an account with administrative privileges.
 - b. Right-click to start a command prompt and select **Run as...** from the pop-up menu.
 - c. After the command prompt appears, run the installer using the options described in the *Installation Options* section of this document.
 - From a pre-Vista version of Windows:
 - a. Log onto an account with administrative privileges and begin the installation as described in this document.

Installation Command Line Parameters

MSI Supported Options

The RTX Silent Installer uses the standard Windows Installer Component (`msiexec.exe`) to perform the installation. You can use other supported `msiexec.exe` options if desired. For a full list of options, enter this command in a Command Prompt:

```
msiexec.exe /?
```

Option	Description
/s	Optional. Makes the <code>setup.exe</code> run silently.
/v	Optional. Tells <code>setup.exe</code> to pass the quoted parameters into <code>msiexec.exe</code> .
/qn	Required. Tells <code>msiexec.exe</code> to run silently.

Unsupported Options

The following options are not supported. If used, an error message will appear and setup will abort.

Option	Description
/a	Administrative install
/j	Advertise a product

NOTE: An administrative install, performed using the `/a` option, is not the same as “running with administrative permissions”. The RTX Runtime Silent Installation must be run with administrative permissions, as explained in this document. An administrative install is performed to a network for the purpose of making a product available to users in a workgroup. This type of group-wide installation is not supported by RTX.

Available RTX Options

Option	Description
ADDLOCAL	Optional. Used to select which features to install on the system. See <i>ADDLOCAL Options</i> for more information.
RTXDIR= <Directory>	<p>Optional. Installation directory. If you omit this parameter, the installation process installs RTX 2016 with Update 3 Runtime into this directory:</p> <p><WINDISK>\Program Files\IntervalZero\RTX</p> <p>where <WINDISK> represents the disk on which Windows is currently installed. If you use this parameter, your installation process is responsible for verifying that the disk exists and the directory is valid and writable.</p>
DT_ICONS	Optional. The DT_ICONS parameter instructs the installer to add RTX icons to the desktop. If you want RTX to be hidden from the user, do not use this parameter.

SM_ICONS

Optional. The SM_ICONS parameter instructs the installer to add RTX to the Start menu. If you want RTX to be hidden from the user, do not use this parameter. Users can still access RTX Properties from the Control Panel. When this parameter is not specified, no start menu icons are displayed.

NOTE: Icons are installed by default. You can suppress them by including DT_ICONS=0 and SM_ICONS=0. For example:

```
RTX2016_with_Update_3_Setup.exe /s /v"/qn ADDLOCAL=HeadersAndLibraries,Tools,VS100 DT_ICONS=0 SM_ICONS=0 RTXDIR="C:\Program Files\IZ\RTX\"
```

ADDLOCAL Options

Arguments to the RTX Silent Installer ADDLOCAL parameter are shown in the table below. RTX uses MSI logic to handle selection of features during silent installation. You can implement the ADDLOCAL property to define a comma-delimited list of features to install.

Option	Description
Documentation	Optional. Information on using the Subsystem, utilities, and tools.
HeadersAndLibraries	Optional. Headers and libraries needed to build RTSS applications.
Subsystem	Optional. Drivers and utilities that make up the RTX Subsystem.
DotNetRuntimeSupport	Optional. Installs runtime support for .Net.
RTTCPIPSupport	Optional. Includes the RTX realtime TCP/IP stack and a number of NIC drivers.
Samples	Optional. Sample applications using the RTX Subsystem.
Tools	Optional. A set of tools and utilities for diagnosing issues and monitoring performance.
SampleSource	Optional. Useful sample application code. This includes device driver samples, as well as RTSS application samples, and Win32 samples showing how to adjust RTX properties programatically.
Symbols	Optional. Debugging symbols for the RTX Subsystem.
MSVSSupport	Optional. Wizards and debugger add-ins for Microsoft Visual Studio.
VS2013	Optional. Wizards and debugger add-ins for Microsoft Visual Studio 2013.

WinDbgSupport

Optional. Real-time debugging support for Microsoft WinDbg.

The installer looks through the entire list of ADDLOCAL parameters provided, and if an option is found that isn't recognized as a valid switch by the installer, an error message is displayed and the installation will not continue.

NOTE: Selecting a sub-feature will automatically select its parent. For example, including `RTTCPIPSupport` will automatically include `Subsystem`.

Format

The following two examples would produce identical results:

```
RTX2016_with_Update_3_Setup.exe /s /v"/qn
ADDLOCAL=
=We-
lcome,Docu-
mentation,HeadersAndLibraries,Subsystem,DotNetRuntimeSupport,RTTCPIPSupport,
Samples,Tools,SampleSource,Symbols,MSVSSupport,VS80,VS90,VS100,WinDbgSupport"
```

and

```
RTX2016_with_Update_3_Setup.exe /s /v"/qn ADDLOCAL=ALL"
```

In the example below, only the Runtime with Tools, Headers and Libs, and Visual Studio 2010 Support is installed:

```
RTX2016_with_Update_3_Setup.exe /s /v"/qn ADDLOCAL=
L=HeadersAndLibraries,Tools,VS100"
```

Installing RTX without Forcing a Reboot

You can use the `/norestart` option to install RTX without forcing a system reboot following installation. For example:

```
RTX2016_with_Update_3_Setup.exe /s /v"/qn /norestart"
```

Silent Warning Messages

The Windows Installer public property option can be used to determine where error information will be recorded.

- `RTX_ERROR_DISPLAY=MessageBox` uses the default action of displaying error messages in a pop-up window.

- `RTX_ERROR_DISPLAY=StringRegVal` places the full message text in the registry. The value name will be the error number and the value data will be the error description.
- `RTX_ERROR_DISPLAY=NumRegVal` places the error number of the message in the registry. The value name will be either `InstallError` or `InstallWarning` and the value data will be the error number.

Information about the product, including any install errors or warnings, if applicable, will be found under the following registry key after the installation has completed:

```
HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{9C4C1267-F21E-46B3-8F30-C3CE0B7F6C41}.
```

NOTE: See [Appendix A](#) for a list of installation warning messages.

Post-Installation Verification by Other Programs

With the new RTX Properties DLL that comes as part of the SDK, you can verify your RTX installation with the `RtcplGetRuntimeVersion` and `RtcplGetRuntimeDirectory` APIs.

Uninstalling Using the Command Line

The same system configuration changes will result when performing a silent install as would occur when using the Windows Add/Remove program utility. See the *Uninstalling* section of the *RTX 2016 with Update 3 Install Guide* for complete details.

In addition, note the following silent uninstall requirements.

- A system reboot is required to complete the uninstallation process of RTX. It is the responsibility of the program that spawns the RTX uninstaller to perform the reboot.
- It is the OEM's responsibility to warn the user that the un-install process stops all running RTSS processes. The silent installer does not warn the user before stopping RTSS processes.

The complete format of the command line interface for uninstalling RTX Runtime is:

```
msiexec /qn /norestart /x {9C4C1267-F21E-46B3-8F30-C3CE0B7F6C41}
```

NOTE: The `/norestart` option allows you to uninstall RTX without forcing a system reboot following the uninstall. To force a reboot, remove this option from the command above.

For a list of the format strings for previous versions of RTX Runtimes, see [Appendix B: RTX Runtime Uninstall IDs](#).

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Product Activation and Configuration

You can activate your product and configure the RTX boot configuration using a Command Prompt.

TO ACTIVATE YOUR PRODUCT (INTERNET CONNECTION REQUIRED):

1. Navigate to the `RTX\bin` directory and run `RtxActivationUtil.exe` as Administrator.
2. Type the `-a` flag, and then provide your activation key. For example:

```
RtxActivationUtil.exe -a IZRTX-111-2222-3333-4444-5555-IZTCP-111-2222-3333-4444-5555-IZSDK-111-2222-3333-4444-5555
```

NOTE: You can find your activation key in the email you received from IntervalZero Sales.

3. If running from a command prompt, the activated components are displayed:
-

SETTING THE BOOT CONFIGURATION (.NET 4.0 REQUIRED):

1. Navigate to the `RTX\bin` directory.
2. Run `RtxActivationGUI.exe` as Administrator.
3. Provide the number of Windows `-w` and RTSS `-r` processors. For example, to assign 3 processors to Windows and 5 processors to RTX, you would type:

```
RtxActivationGUI.exe -w 3 -r 5
```

4. Restart the system.
-

Appendix A:

Installation Warnings

Possible registry key values in case of a warning during a silent install are shown in the following table.

Nbr	Description of the warning
500	Unable to back up boot.ini file.
501	Unable to back up boot.ini file.
502	Unable to back up boot.ini file.
505	Setup was unable to interface with the power management service. Please note that an RTX-Compatible power configuration will not be created. See the RTX Installation Guide for details on the RTX Recommended power state.
506	Setup was unable to interface with the power management service. Please note that an RTX-Compatible power configuration will not be created. See the RTX Installation Guide for details on the RTX Recommended power state.
507	There was an error enabling the RT-TCP/IP stack.
508	There was an error setting TCP/IP-USB dependency.
509	There was an error enabling the RTX USB stack.
510	Setup was unable to save your current boot configuration. During the upgrade process, the default RTX boot configuration will be created.
511	Setup was unable to save your current boot configuration. During the upgrade process, the default RTX boot configuration will be created.
512	Setup was unable to save your current boot configuration. During the upgrade process, the default RTX boot configuration will be created.
513	Setup was unable to save your current boot configuration.

514	Setup was unable to save your current boot configuration. During the upgrade process, the default RTX boot configuration will be created.
<hr/>	
515	Unable to back up boot.ini file.
<hr/>	
516	Unable to back up boot.ini file. The upgrade process will revert your RTX boot configuration to RTX defaults.
<hr/>	
517	Unable to restore boot.ini file. Your boot configuration settings are saved in boot.ini_bak. You may manually copy this file over the boot.ini file to restore your settings.
<hr/>	
518	Before installing RTX, setup created a backup of your original (pre RTX 2016 with Update 3) boot.ini file and named it "boot.ini_". During the current upgrade process, setup copied this backup file before uninstalling RTX 2016 with Update 3 . Setup is trying to copy the second backup "boot.ini__bak" back to "boot.ini_" for later use, but failed to do so.
<hr/>	
521	Setup failed to stop the RTX Real-time Subsystem or failed to determine its state.

Appendix B:

RTX Runtime Uninstall IDs

You can uninstall RTX Runtimes via command line using the format strings in the table below.

RTX Version	Complete Format of the Uninstall Command Line Interface
RTX 2016 with Update 3	msiexec /qn /x{9C4C1267-F21E-46B3-8F30-C3CE0B7F6C41}
RTX 2016	msiexec /qn /x{3F54F587-AF5D-46B8-8C26-DFBC501DCD57}
RTX 2012 with Update 4	msiexec /qn /x{6E532AD5-1773-4E86-A911-4FC056308607}
RTX 2012 with Update 3	msiexec /qn /x{773D53C9-5F0C-4727-A481-8D59B2BD165E}
RTX 2012 with Update 2	msiexec /qn /x{524833E7-ACD9-4D71-9471-DF2C66D7457A}
RTX 2012 with Update 1	msiexec /qn /x{DC250EE7-28BC-43B3-BED8-999CCDDF62B5}
RTX 2012	msiexec /qn /x{287DF0CC-7A4A-4207-8D8E-967BE17000E1}
RTX 2011 with SP1 (10.1.0)	msiexec /qn /x{35A2CB52-68DF-4D7C-B09D-5858E76F2456}
RTX 2011 (10.0.0)	msiexec /qn /x{35A2CB52-68DF-4D7C-B09D-5858E76F2456}
RTX 2009 with SP2 Update 2	msiexec /qn /x{D8821064-BBA3-456A-B218-DF1932A28D6B }
RTX 2009 with SP2 Update 1	msiexec /qn /x{30123237-4D15-446F-85DD-937C922FD931 }
RTX 2009 with SP2 (9.1.2)	msiexec /qn /x{54063936-3D73-4973-BFE7-E20599F4DFEB}
RTX 2009 with SP1 (9.1.1)	msiexec /qn /x{54063936-3D73-4973-BFE7-E20599F4DFEB}
RTX 2009 (9.1.0)	msiexec /qn /x{022AF2DF-CF07-4DF9-97F5-B96851344103}
RTX 9.0	msiexec /qn /x{5F68BBA7-1A6F-4778-A4B9-8073BF1E7EEF}
RTX 8.1.2	msiexec /qn /x{{0532C018-D9C1-47FD-A57A-4C26EAB4DD57}}

Getting Support

IntervalZero offers a number of support options for RTX users, including technical support and the IntervalZero Website.

Third-Party Support

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

Contacting Technical Support by Phone

For technical support related to installing and using RTX, you can call 1-781-996-4481. At the prompt, press 3 for Support.

Hours are Monday - Friday, 8:30 a.m. – 5:30 p.m. US Eastern time (GMT-500), 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 use when accessing the IntervalZero support Website.

The Version Number of Your RTX Software

Before calling technical support, determine the version of RTX installed on your system.

To obtain the RTX version number:

1. From the start menu, select **IntervalZero > RTX 2016 with Update 3 > RTX Properties**.
2. Record the RTX version that is shown in the RTX Properties window.

If the RTX Properties window is not available from the Start menu, select it from the Windows Control Panel.

IntervalZero Website

The IntervalZero Customer Support Web page is located at:

<http://www.intervalzero.com/technical-support/>

The IntervalZero support web pages provide electronic access to the latest product releases, documentation, and release notes. With a valid e-mail address and password, you can access the online problem report database to submit new issues or to obtain the status of previously reported issues.

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