

Product Release Notice

RTX64 2014 with Service Pack 2

General Availability Release Date

July 24, 2015

Product Overview

RTX64 2014 with Service Pack 2 is the latest 64-bit version of IntervalZero's market-leading hard real-time software products. This release provides a number of new features, usability improvements and resolved issues. The update can be downloaded [here](#).

Release Highlights

- Support for Windows 8.1 with Update. (3220, 3221)
- Support for a smaller form factor dongle that can hold license information, removing the need to manually import a separate license file. (3394)
- Support for custom search paths in the RTX64 Subsystem for use by RtCreateProcess and LoadLibrary. (3895, 3709, 2027)
- New command line tools to view internal RTSS objects and get RTSS processor CPU usage. (3782, 3454)
- The ability to associate a monitor event to a trigger that can start monitoring. (2971)
- The RTIGB network driver was expanded to support the Intel I217 and I218 controllers. (3711, 3228, 3100)

Features and Resolved Issues

RTX64 2014 with Service Pack 2 includes new functionality and resolves a number of previously reported issues. See the Product Release Notes for a full list of new features and resolved issues.

Activation and Configuration

- Adds support for smaller form factor dongles that can hold license files. (3394)
- Adds functionality to provide dongle information through command line utilities and API calls. (3880)
- Resolves an issue regarding the RTX64 Activation and Configuration utility sometimes taking several moments to launch. (3818)
- Resolves an issue regarding license expiration warnings not being displayed for RTX64 Runtime and/or RT-TCP/IP Stack-related components. (3182)
- Resolves multiple issues that occur when a dongle was not plugged in at system start. (3937, 3938)

Subsystem

- Adds support for Windows 8.1 with Update. (3220, 3221)
- Supports custom search paths in the RTX64 Subsystem to allow RTX64 to load an RTSS application or RTDLL by base filename only. (3895, 3709, 2027)
- Resolves an issue regarding starting and stopping the Subsystem repeatedly causes subsystem instability. (2731, 3555, 3224)
- Resolves an issue regarding high Windows Inter Process Interrupt (IPI) activity sometimes causes jitter within RTSS processes. (3747)
- Resolves issues regarding Blue Screens sometimes occurring when RtsKill was used to terminate a RTSS application that used the RT-TCP/IP Stack. (2776, 3295)
- Adds support for the use of the Windows driver verifier tool on key RTX64 drivers. (3577, 3563, 3347)

Tools and Utilities

- Adds a RTX64 CPU usage command line utility, which displays CPU usage information for all RTSS cores on the system. (3782)
- Adds a RTX64 objects command line utility, which displays information about RTSS processes and their associated objects, such as events, semaphores, and loaded RTDLLs. (3454)

- Resolves an issue regarding the RTX64 SDK Welcome Screen appearing after reboot even when the *Don't show this again* check box had been selected. (3652)
- Resolves issues with the Control Panel, including:
 - Resolves an issue regarding the default *Timeout* value for the *Monitor for runaway threads* setting being incorrectly set. (3263)
 - Resolves an issue regarding attempts to launch the RTX64 Control Panel immediately after booting that results in a delay. (3853)
 - Resolves an issue regarding the Subsystem not being able to be stopped immediately after it was started from the Control Panel. (3038)
 - Resolves an issue regarding the allowable range of values for Stack Maximum Transmission Unit (MTU) being inconsistent between the Control Panel and RTX64Config utility. (3739)
- Resolves issues with RTX64 Task Manager, including:
 - Resolves an issue regarding the RTX64 Task Manager not working correctly after it was terminated by the Windows Task Manager. (3322)
 - Resolves a memory leak in the RTX64 Task Manager. (3811)
- Resolves issues with RtssPing, including:
 - Resolves an issue regarding RtssPing not working with IPv6. (3103)
 - Resolves an issue regarding pings continuing indefinitely when RtsKill was used to terminate RtssPing. (3258)
- Improves error reporting of the RtssArp utility. (3108)

Monitoring

- Provides the ability to associate a monitor event with a trigger to start monitoring (2971)
- Improves the Timer Set monitoring event to include fields for Expiration Period and Interval Period. (3302)
- Redesigns the Monitor utility for ease of use and adds support for the optional association of monitor events with triggers. (3376)
- Adds new memory free failure events to the set of Monitor collection events. (3410, 3290)
- Resolves an issue regarding two Proxy Thread Create events were generated for the same thread. (3607)

RT-TCP/IP Stack and Drivers

- Adds support for the Intel i217 and i218 Network Interface Cards (NICs). (3711, 3228, 3100)
- Adds support for the Intel Gigabit ET2 Quad-Port NIC. (3323)
- Improves cleanup logic for cases where WSACleanup is not called within an application that has called WSAStartup. (3952)
- Resolves an issue regarding the RT-TCP/IP Stack and Subsystem not being able to be stopped after WSAStartup was called multiple times. (3915)
- Resolves an issue regarding the Subsystem not being able to be stopped when the Virtual Network was enabled and a physical NIC was configured. (4033)
- Resolves an issue regarding the RT-TCP/IP Stack ignoring the PreferMsi value. (3984)
- Resolves an issue regarding the RT-TCP/IP Stack not being able to be stopped by RTX64Config when the Stack was configured to start automatically. (3442)
- Resolves an issue regarding the Stack not displaying an error message when the Stack was busy and RtnDFrameTransmit was called. (3821)
- Modifies the Connect timeout to 15 seconds to match Windows Stack behavior. (2847)
- Increases the maximum number of ARP entries to 256. (2790, 3419)

Debugging

- Adds new debugging properties to application Property Pages in Visual Studio. You can:
 - Choose to override default subsystem behavior.
 - Set the ideal processor for the main thread.
 - Set the processor affinity mask. (3848)
- The Threads window in Visual Studio now displays the Thread Affinity for a given thread. (3753)

SDK

- Adds new API functions that list the serial number for each dongle connected to the machine. (2676)
- Adds new API functions that retrieve information about licenses installed on the system. (3034)

- Adds new API functions that verify whether a specified RTX64 Runtime or RT-TCP/IP Stack version is installed and licensed.
- Adds new API function and structures which retrieve the addresses associated with the adapters on the local computer. (3536)
- Expands the enumeration RTX64_MONITOR_CONTROL_OP to include operations for setting and resetting triggers for monitoring events. (4139)
- Adds Seek functionality to the managed code framework monitoring interface. (3819)
- Adds some additional samples to demonstrate performance impact from cache and how to programmatically configure the subsystem. (2774, 2834)
- Resolves an issue regarding the Real-time API RtTranslateBusAddress behaving unexpectedly when passed invalid parameters for *pAddressSpace* and *pTranslatedAddress*. (3444)
- Resolves an issue regarding RtnIsDeviceOnline not returning the correct value. (3825)
- Resolves data corruption issues in RtnReceive. (3843)
- Resolves an issue regarding RtPrintf and RtWprintf not always outputting all lines of text to the Server console window. (3857)
- Resolves an issue regarding RtGetClockTime not syncing among Windows cores when used in a Windows application. (4000)
- Resolves a clock drift issue with RtSetClockTime and RtGetClockTime. (3994)
- Resolves an issue regarding HeapFree succeeding when it should have failed. (4172)
- Exposes the Socket options for Maximum number of queues sent and received datagrams on non-tcp sockets (TM_SO_SND_DGRAMS, TM_SO_RCV_DGRAMS). (2647)

Installation

- Modifies the RTX64 power policy for laptops to improve performance. (3888, 3917)
- Resolves issues around upgrading from previous releases. (3997, 3929)
- Resolves an issue regarding the RTX64 Merge Modules not correctly creating the RTX64 boot line. (4113)

Activation & Licensing

The IntervalZero product licensing system allows for flexibility in how features are activated and deployed. Please [click here](#) for an overview of IntervalZero product licensing.

For additional information on deployment, refer to the *RTX64 Deployment Guide* located on the [IntervalZero web site](#).

Availability

RTX64 2014 with Service Pack 2 is available beginning July 24, 2015 through Partners and by contacting Sales: sales@intervalzero.com or (781) 996-4481.

We look forward to comments and feedback. If you have any recommendations, or wish to suggest any product enhancements, please contact Product Management at: productmanagement@intervalzero.com.