64-bit SonarWiz: What to Expect

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1   Scope

This document describes the reason and rationale for the recent SonarWiz 64-bit application enhancement.

2   Definitions

1. SonarWiz x86—the 32-bit version of SonarWiz
2. SonarWiz x64 – the 64-bit version of SonarWiz

3   Overview

As a general rule, if you have under 4 GB of RAM in your computer, you don't need a 64-bit CPU and operating system (OS). If you have 4 GB or more, you'll get benefits from having a 64-bit OS and chipset on your PC. The Windows 32-bit operating system can only access less than 4G of the available memory in your PC. Even if your PC has 32GB of memory you can still only access 3-4GB per application, with a 32-bit OS and chipset.

Here's an example. Say you bought a PC with 16GB of RAM, thinking it would help to have more RAM, but your OS and chi-set are 32-bit:
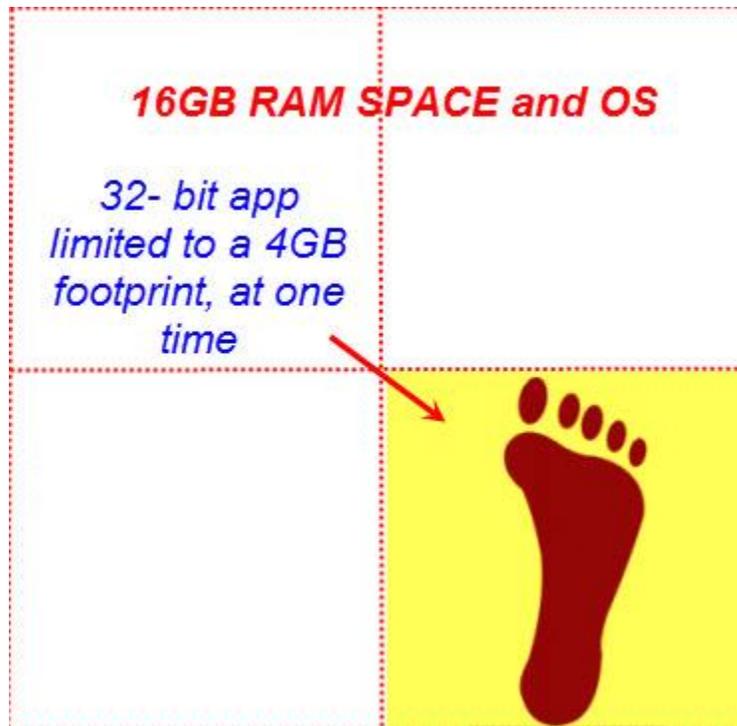
The application RAM "footprint" of a 32-bit SonarWiz is limited to a 4GB range, within the full 16GB RAM area of your 32-bit OS/chip-set PC, even if your PC has more RAM.

With a 64-bit CPU and OS, an application like 64-bit SonarWiz can access virtually all of the memory in your system. Since the OS and other apps may use 1-2GB or the available RAM, that still leave 14GB or more accessible to 64-bit SonarWiz!

4   Motivation

Why develop SonarWiz for a new platform? It's rare to purchase a new computer these days, which is not based on a 64-bit CPU and a 64-bit operating system. Sonar processing is inherently a memory-intensive task, which benefits by having large amounts of system memory, with which to work. As SonarWiz continues to evolve, we wanted to provide a more robust, and efficient application, for our customers to be able to use more of the resources available in their modern PCs, especially those PCs with more than 4GB of RAM. This was simply not possible with a 32-bit architecture.

5   FAQs for SonarWiz x64?

5.1   What Should I expect from SonarWiz x64?
   1. You can expect better performance when handling large projects! SonarWiz x64 can address virtually all of the memory in a modern PC, which is not being used

by the operating system and other processes. More available memory translates into improved ability to support larger projects.

2. 64-bit processors also include more, and wider, registers - the super-fast internal storage locations, even faster to access and use than RAM. This additional computational power will translate to a modest bump (5-10%) in computational speed, when running 64-bit SonarWiz.

5.2   What if I don't want SonarWiz x64?

Chesapeake Technology will continue to build both the 32-bit and 64-bit versions of SonarWiz for the foreseeable future, or until 32-bit operating systems are completely gone and unsupported. The 32-bit and 64-bit versions of SonarWiz are built from the same source code, so the two versions will have identical functionality and features.

5.3   Can I install both SonarWiz x86 and SonarWiz x64?

1. Yes! SonarWiz x86 and SonarWiz x64 are installed in different locations on your hard drive, but do share some common elements.
2. You can only run one version of SonarWiz at a time.
3. SonarWiz x64 will only operate under a 64-bit operating system. SonarWiz x86 will work on either 32-bit or 64-bit Windows.

5.4   How do I know if 64-bit SonarWiz will help me?

Check your Start -> Settings -> Control Panel area and select SYSTEM:
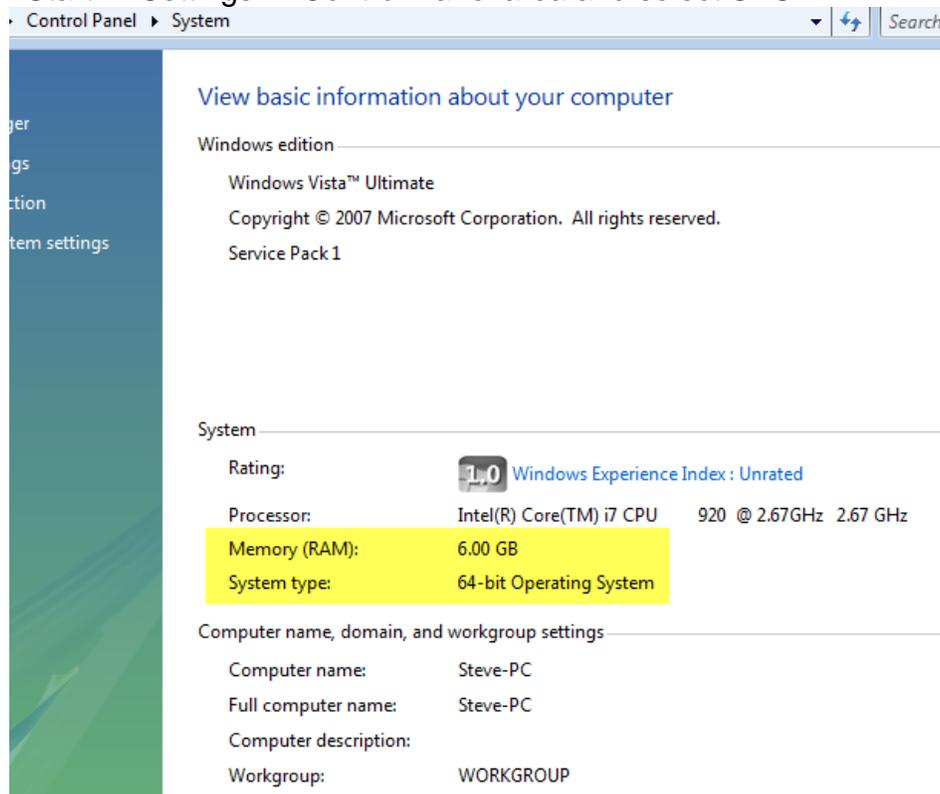
Confirm your operating system type (32-bit or 64-bit), and your random-access memory storage space (RAM) size. If you have a 64-bit OS, and more than 4GB of RAM, 64-bit SonarWiz will help you. Give it a try!

5.5   When is 64-bit SonarWiz available, and to whom?

Like the upgrade from SonarWiz 5, to SonarWiz 6, the freedom to upgrade from 32-bit SonarWiz to 64-bit SonarWiz is available to ANY customer with a current EMA (Extended Maintenance Agreement) on their SonarWiz license key. The EMA is a benefit implicit to the first year of a new SonarWiz license key, but thereafter may be renewed annually, or for multiple years, by contacting our sales@chesapeaketech.com team, for a price quote.

5.6   Where do we find 64-bit SonarWiz?

All downloaded software is available via the Internet at www.chestech-support.com, and the area to select is called SonarWiz:

As of of mid-January, 2016, 64-bit SonarWiz was available as a BETA TEST version, for evaluation, in release 6.02.0010. We still recommended 32-bit SonarWiz though, for your production post-processing work.

Starting with release 6.04.0001 3/5/2016, we removed the BETA qualifier from the SonarWiz release, and production 64-bit support was provided as your download option:

5.7   Can I install 64-bit SonarWiz in a 32-bit system (e.g. Windows 32-bit)?

It won't hurt to try, but you'll get an error message:
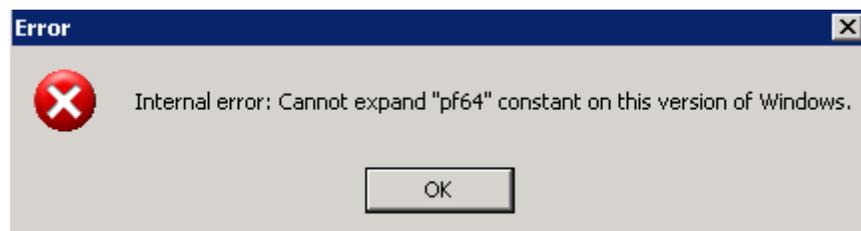
5.8   How do I use real-time servers with 64-bit SonarWiz ?

This takes special care. You have a real nice set of options with installation folders now.

SonarWiz 5.08.0012, the final release of SonarWiz5, would by default install here:

C:\Program Files (x86)\Chesapeake Technology, Inc\SonarWiz5

SonarWiz 6 32-bit (x86) version by default installs here:

C:\Program Files (x86)\Chesapeake Technology, Inc\SonarWiz6

In yet a third and different installation folder, SonarWiz 6 64-bit version by default installs here:

C:\Program Files\Chesapeake Technology, Inc\SonarWiz6

So when you run any of the 6.02.001 and later versions of real-time servers, compatible with 64-bit SonarWiz (6.04 and later), you specify the 64-bit installation directory during the installation wizard dialog sequence like this (Edgetech 4600-6205 server example):
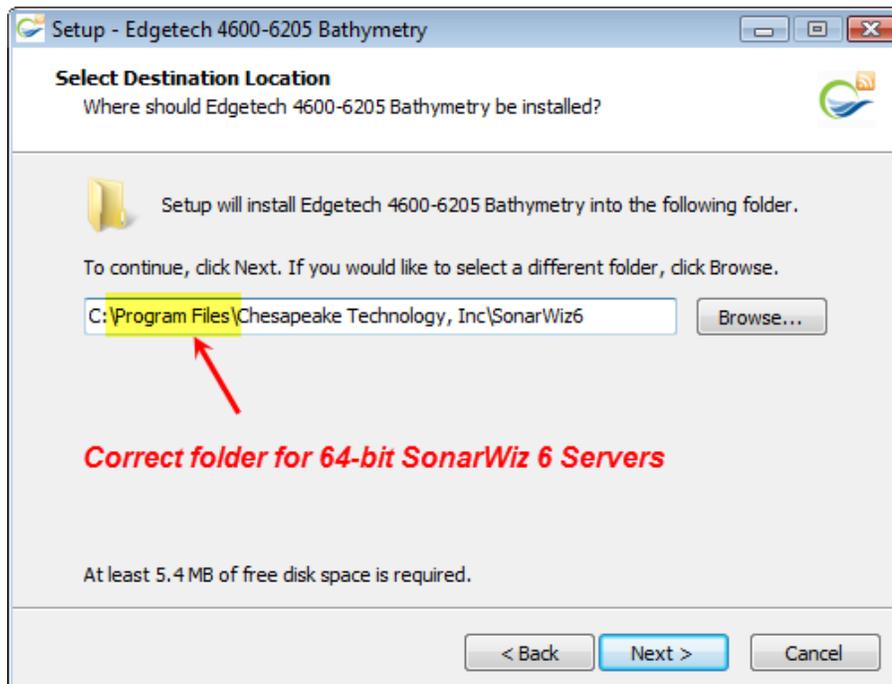
Initial screen:
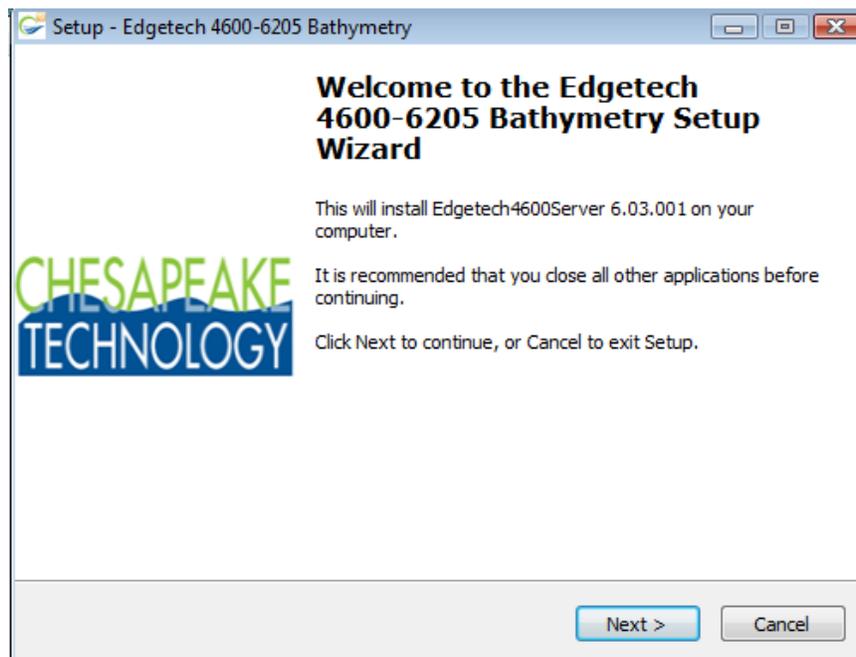
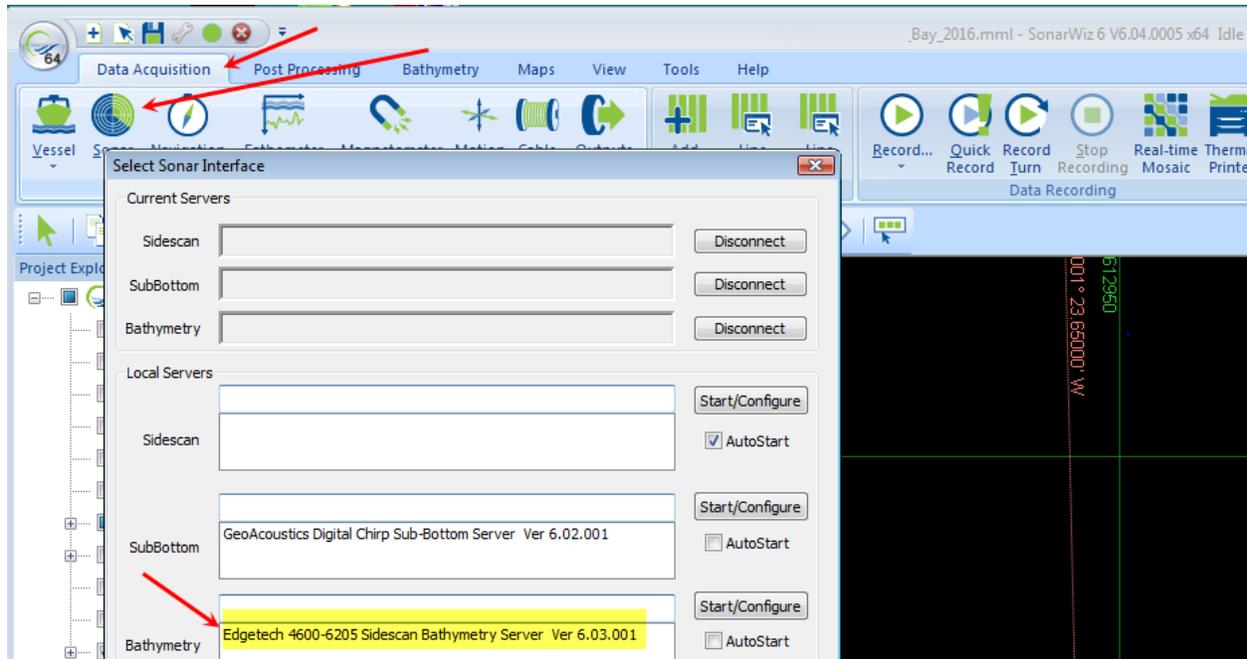DESTINATION FOLDER: Real-time server 32-bit SonarWiz 6 installation:
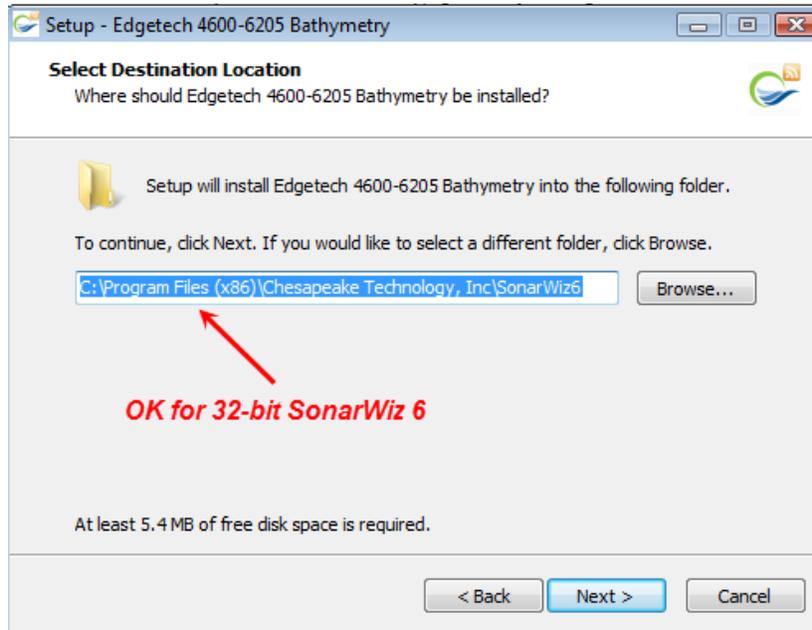
DESTINATION FOLDER: Real-time server 32-bit SonarWiz 6 installation:

(change it before clicking NEXT> to set up for 64-bit SonarWiz)

In both cases, the final place for servers to install is ...\SonarWiz6\Servers and if you have done it right, and you are licensed for that server, then when you run SonarWiz 64-bit and select DATA ACQUISITION -> Sonar, you will see your server choice presented like this:

In the SonarWiz 6 64-bit case above, the Servers folder looks like this:

All of the 6.02.0001 and later version real-time server installers have this capability of being directed to save the servers in a destination hard drive, and folder, of your choice.