Product Bulletin 70

Product	Any version of StorNext® running on a Windows® operating system.
Summary	Kernel or complete memory dumps need to be enabled for Quantum to provide complete problem analysis
Date	March 2011

Problem

Successful analysis of Windows system crashes requires the memory dump of all kernel memory at the time of the crash.

Symptoms

The Windows operating systems can be configured to save various memory dump files when the computer stops unexpectedly. Windows can generate complete memory dumps, kernel memory dumps or mini memory dumps.

Complete memory dumps save all the contents of system memory when the computer stops unexpectedly. The kernel memory dump saves only the content of the kernel memory. The mini memory dump saves only enough information to identify why the computer stopped. The mini dumps do not provide the binary or executable files that are in memory at the time of the system crash, and contain only part of the data needed to reliably analyze the source of the crash.

Solution

To aid in the analysis issues on Windows systems running StorNext, these systems should be configured to generate kernel or complete memory dumps.
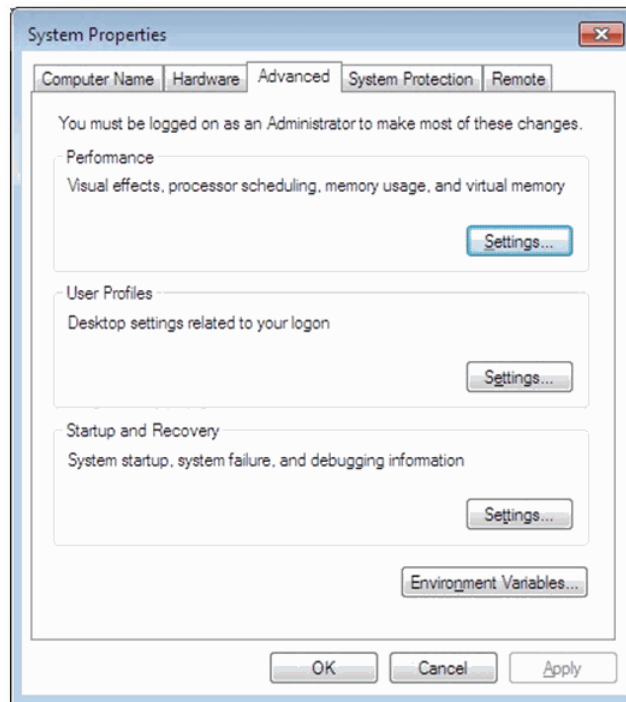
For Windows Vista, Windows Server 2008 or Windows 7

To enable kernel memory dumps in Windows Vista, Windows Server 2008 or Windows 7, do the following:

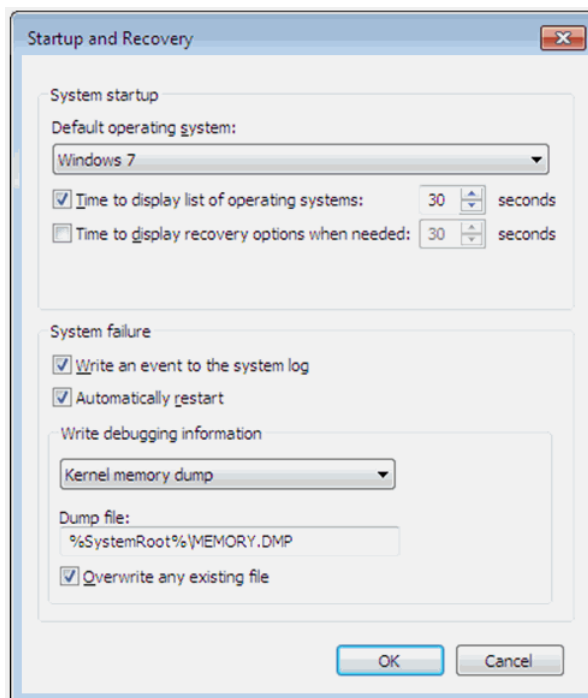1 Open the Windows **Control Panel**.

2 Select **System and Security**.

3 Click **Systems**.

4 Select **Advanced System Settings**.

5 In the **Startup And Recovery** section, click **Settings**.
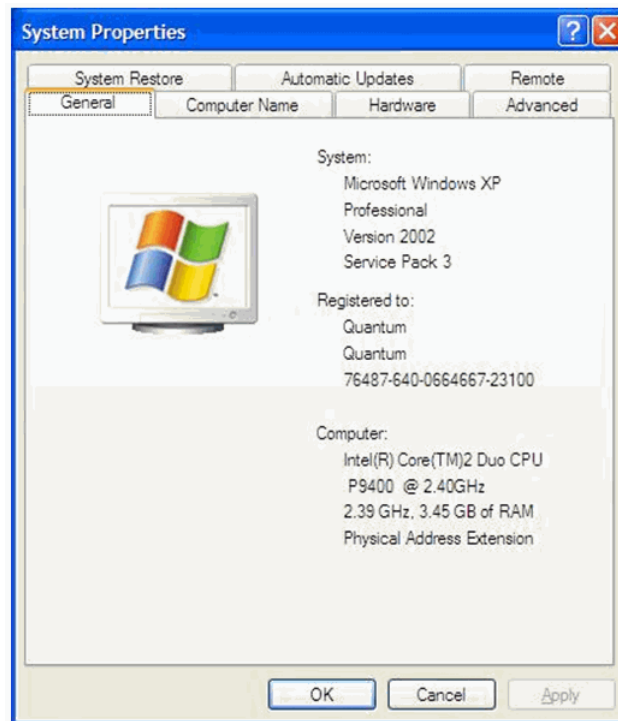
6 In the **Write debugging information** section, select **Kernel memory dump** and then click **OK**.
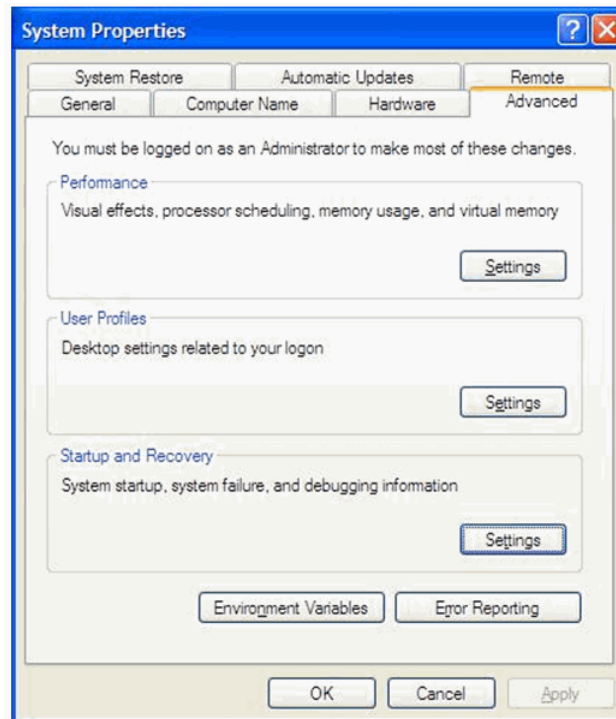
For Windows XP and Windows Server 2003

To enable kernel memory dumps in Windows XP and Windows Server 2003 do the following:

1 Left-click on **Start** and then right click on **My Computer.**
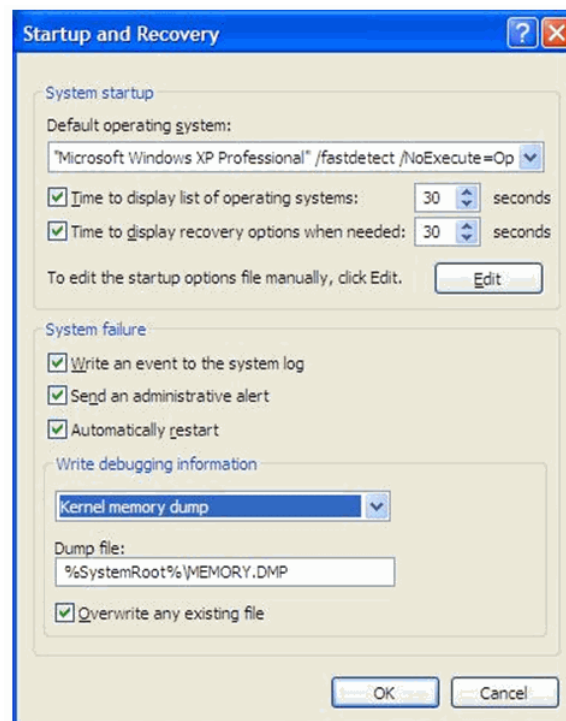
2 Select **Properties**.

3 Click the **Advanced** tab.

4 In the **Startup and Recovery** section, click **Settings**.

5 In the **Write debugging information** section, select **Kernel memory dump** and then click **OK**.

On Windows XP and Windows Server 2003 systems, dump files are located at `c:\Windows\MEMORY.DMP`.

For additional information, see Microsoft Knowledge Base article 254649 (http://support.microsoft.com/kb/254649).

Default Memory Dump Types

Following are the Default memory dump types for various Windows operating systems:

- Windows XP: Mini memory dumps
- Windows Server 2003: Complete memory dumps
- Windows Vista: Kernel memory dumps
- Windows Server 2008: Complete memory dumps

The complete memory dump is not available on computers that are running 32-bit operating systems with 2GB or more of RAM.

Memory Dump File Sizes

Following are the allocated sizes for each memory dump type:

- Mini dumps = 64KB
- Kernel memory dumps = size of kernel memory
- Complete memory dumps = size of system memory + 1MB

Workaround

The Windows mini dumps are of limited value for proper crash analysis, but they can provide some information.

Contacting Quantum

More information about StorNext is available on the Quantum Service and Support website at www.quantum.com/ServiceandSupport. The Quantum Service and Support website contains a collection of information, including answers to frequently asked questions (FAQs). You can also access software, firmware, and drivers through this site.

For further assistance, contact the Quantum Technical Assistance Center:

North America	+1 800-284-5101 Option 5
EMEA	00800 9999 3822
Online Service and Support	www.quantum.com/OSR
World Wide Web	www.quantum.com/ServiceandSupport

(Local numbers for specific countries are listed on the Quantum Service and Support Website.)