

Configuring SQL Server RAM

This application note describes how to manually configure the RAM that is allocated to Microsoft SQL Server 2005. This application note is intended for advanced users only.

1. Overview

System administrators must manually configure the amount of RAM that is allocated to Microsoft SQL Server in order for your ProHelp® EPM system to function properly.

This application note presumes that the ProHelp® EPM server has a minimum of 2 GB of RAM. Customers who have less than 2 GB of RAM in the server should upgrade their computer immediately.

2. How Much RAM Should I Allocate

Determining the amount of RAM to allocate to SQL Server is not a science – it is more of an art. One suggestion is to use the following rules-of-thumb:

- Reserve 1-2 GB of RAM for Microsoft Windows Server, ProHelp® EPM, and other software programs, if the computer has more than 3 GB of RAM.
- Allocate all remaining RAM to SQL Server.
- Never allocate less than 1 GB of RAM to SQL Server.

Consider the following examples:

Assume system #1 has the minimum recommended amount of RAM – 2 GB. Using the rules above, you might allocate 1 GB of RAM for SQL Server and leave the remaining 1 GB unallocated (for use by “other” processes).

Assume system #2 has 4 Gig of RAM. Using the rules above, you might allocate 2 GB of RAM to SQL Server and leave the remaining 2 GB unallocated.

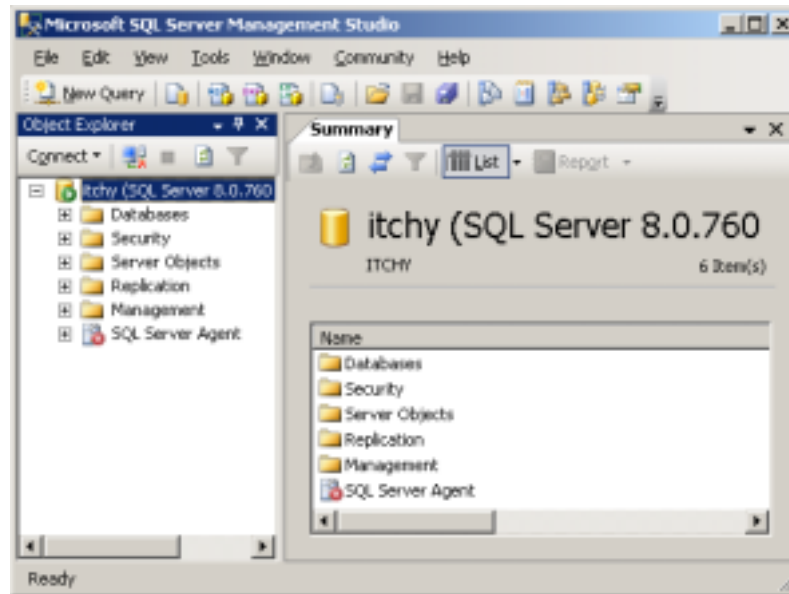
Assume system #3 has 1 GB of RAM. You should upgrade the computer immediately!

3. Configuring SQL Server

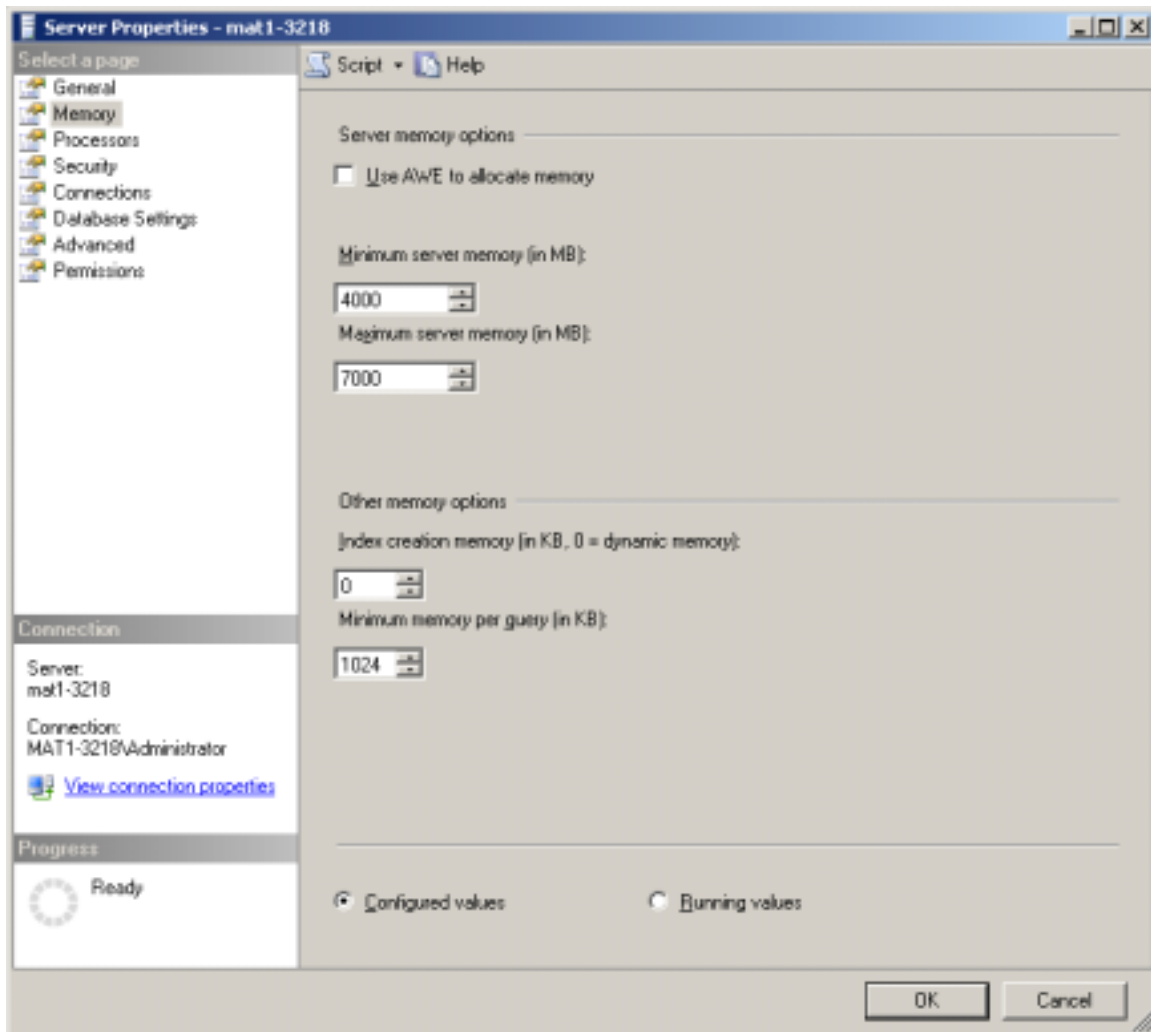
Microsoft SQL Server no longer allows you to allocate a fixed amount of RAM. Rather, you must allocate the minimum and maximum amounts of RAM that SQL Server can use.

To configure the amount of RAM for use by SQL Server, follow these steps:

- Reboot the computer and log in as **Administrator**.
- Execute the **SQL Server Management Studio**. To do this, click on the Microsoft Windows **Start Menu**, click **Programs**, click **Microsoft SQL server 2005**, and select **SQL Server Management Studio**.
- Navigate to the appropriate server name, as shown below:



- Right click on the appropriate server and select **Properties**.
- Click the **Memory** page, and specify the **Minimum server memory** and **Maximum server memory** for SQL Server to use, as appropriate.



SQL Server (64-Bit) Memory Configuration

- Press **OK** to save your changes.
- Click on the File menu and select **Exit** to close the **SQL Server Management Studio**.
- Reboot the computer to ensure that your changes take effect.

4. 64 versus 32-bit Systems

If you are using 32-bit Microsoft Windows Server, then SQL Server can't use more than 2 GB of RAM without extra configuration. A major benefit that is associated with 64-bit Microsoft Windows Server and 64-bit Microsoft SQL Server is that it allows the system to access up to 32 GB (or more) of RAM.

A typical customer may only collect 2 to 4 GB of data per year. If you purchased a computer with 8 GB of RAM, you might allocate 6 or 7 GB of RAM to SQL Server and leave the remaining RAM unallocated. This would allow you to potentially keep 2-3 years worth of data in RAM and would dramatically increase system performance!