Expanding an ICM SQL Database

Document ID: 20493

Introduction

This document describes how to expand a Cisco Intelligent Contact Management (ICM) database to give the database more room for data or log space.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- ICM databases
- Cisco Intelligent Contact Management Database Administrator (ICMDBA) utilities
- Microsoft Structured Query Language (SQL) database sizing concepts

Components Used

The information in this document is based on these software and hardware versions:

- ICM version 4.6.2 and later
- SQL Server version 7.0

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

The Basics

There are three types of databases that you might need to expand:

- Logger
- Administrative Workstation (AW)
- Historical Database Server (HDS)

All three are expanded in the same way.

ICM provides a utility that you can use to manipulate databases, ICMDBA. ICM version 4.6.2 supports both SQL Server 6.5 and 7.0. ICM versions 5.0 and later support SQL Server 2000. You can also use the Microsoft utility called Enterprise Manager. Either method results in an expanded database.

In SQL Server 6.5, databases are made up of one or more logical devices. In SQL Server 7.0, databases are made up of one or more physical files. Each device or file is assigned a specific role, such as data or log space. When multiple devices or files are used for a single database, they do not have to be in the same location. This is convenient when you expand a database because it allows you to put the new device or file on a different logical and/or physical drive.

When you expand a database, you can either expand an existing device or file, or create a new device or file. Either way, the database has new space available.

When you expand a database, the goal is to give the database more room for either data space or log space. Both can be expanded in the same way.

Expand Space with Use of ICMDBA

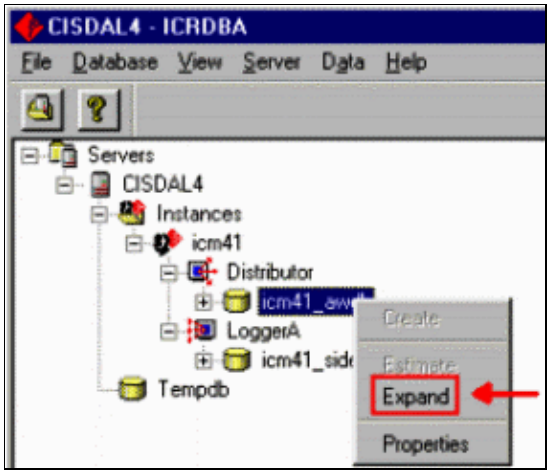
When you use ICMDBA to expand a database, the utility automatically creates device or file structures as needed.

Note: Shut down services for ICM during the expansion.

Complete these steps in order to run ICMDBA and expand the database:

1. Run the **ICMDBA.EXE** command to launch the utility.
2. Find the machine, instance, and database you want to expand.
3. Right−click the database, and choose **Expand**.

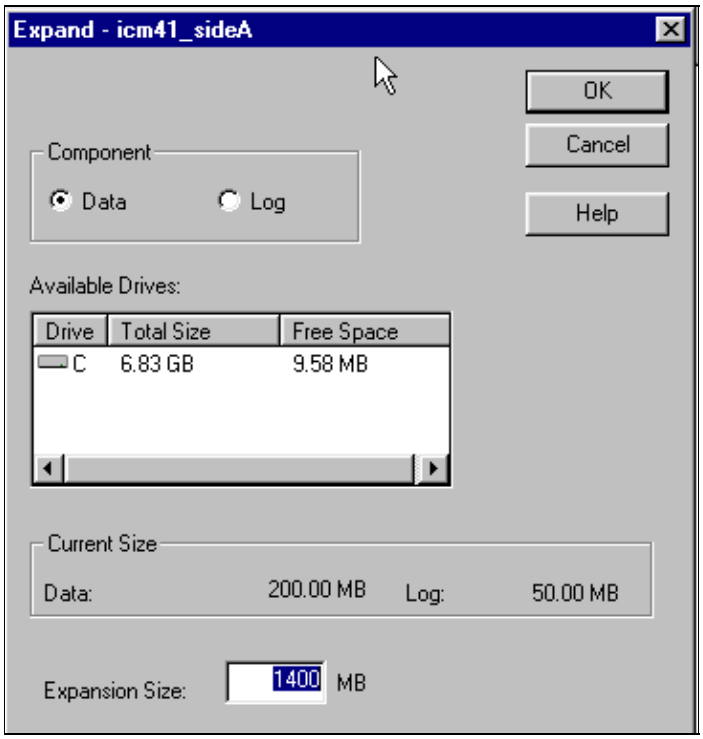
Figure 1 Properties



The Expand dialog box opens.

4. Check either **Data** or **Log** under Component in order to choose the type of expansion.

Figure 2 Expand



5. Choose the location of the expansion drive under Available Drives.
6. Enter the amount of additional space (MB) in the Expansion Size field.
7. Click **OK**.
8. Choose **Server** > **Start** from the menu bar in Figure 1.

When To Use Enterprise Manager

While it is easier to use ICMDBA to expand databases, it is necessary to use Enterprise Manager if either of these is true:

- You must leave ICM services running.
- You are expanding the database dramatically (15 GB or more).

Note: For SQL Server 6.5, a single device should not have more than 16 GB of space. Use multiple devices if you have a database larger than 16 GB. The procedure for multiple devices is similar to the Expand Space with Use of ICMDBA procedure. The only difference is that you repeat the steps for each 15 GB device you need to create. This limitation does not exist for SQL Server 7.0 or SQL Server 2000.

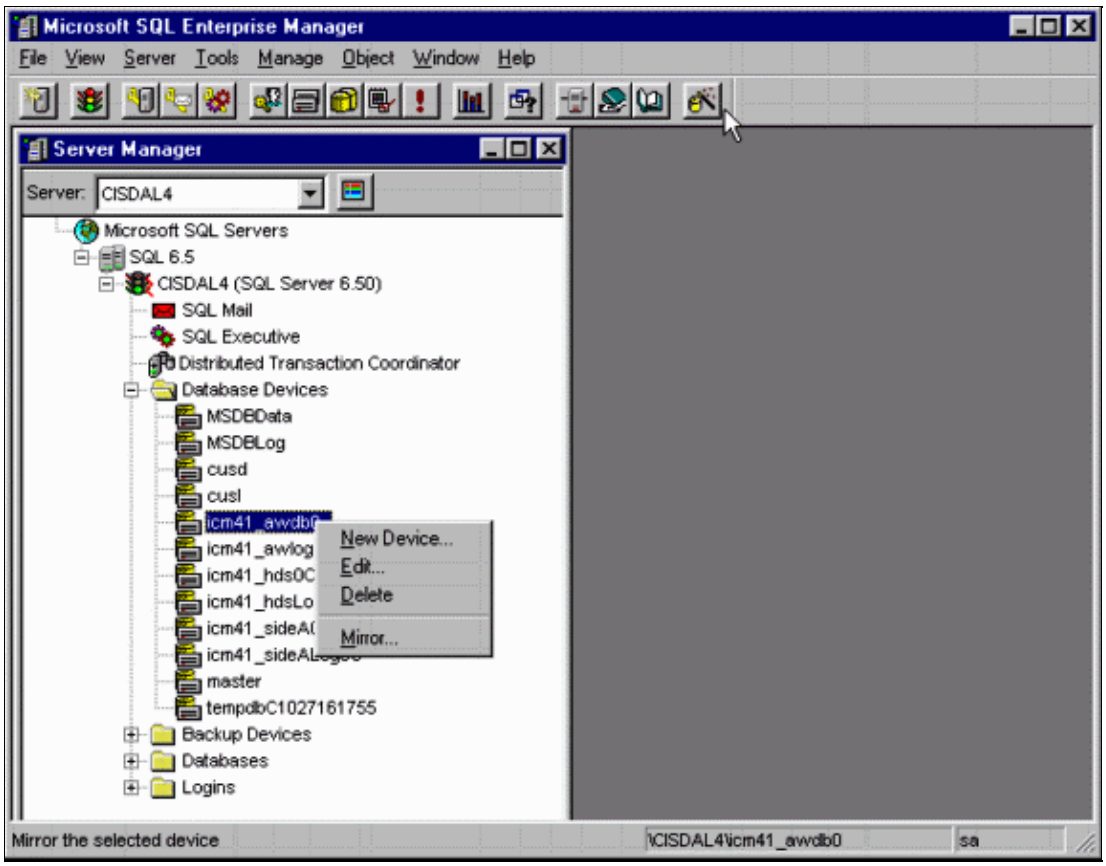
Expand Space with Use of SQL Enterprise Manager

SQL Server 6.5

Complete these steps in order to expand a device that exists:

1. Double−click the device, or right−click the device and choose **Edit** from the pop−up menu in order to modify.

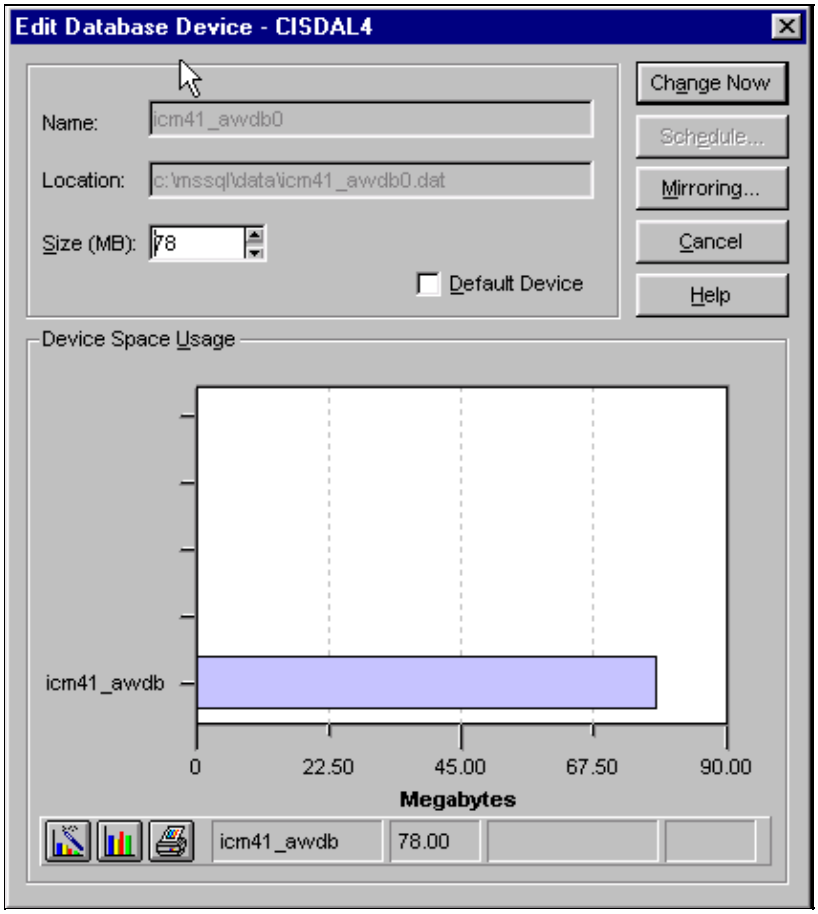
   Figure 3 SQL Enterprise Manager



   The Edit Database Device dialog box opens.
2. Increase the size (MB) value to the new size, and click **Change Now**.

   Note: Enterprise Manager limits the size (MB) value to the available drive space, so the value cannot be set to exceed the available drive space.

   Figure 4 Edit Database Device

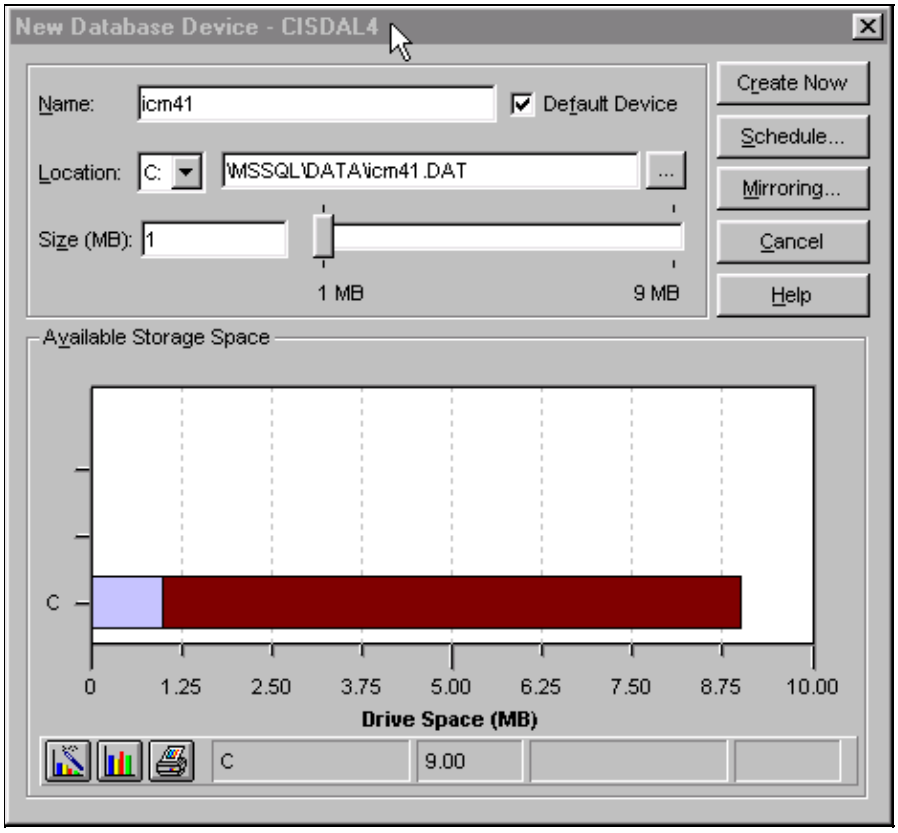


Complete these steps in order to create a new device:

1. Right−click the **Database Devices** folder, and choose **New Device** from the pop−up menu.

   The New Database Device dialog box opens.
2. Assign a Name, Location and Size (MB) for the new device, and click **Create Now**.

Figure 5 New Database Device



Other than the assign a name and location step, the procedures on how to expand a device and create a device are the same.

The expansion of a device that exists is a very clean expansion because no new devices are created. However, it limits you to the amount of space available on the drive where the device is located. Therefore, you cannot take advantage of space available on another drive. Nevertheless, it can be a good option if drive that exists has plenty of space available.

Complete these steps in order to expand space when you use a device that exists:

1. Launch the SQL Enterprise Manager.
2. Expand the server in the Server Manager window.

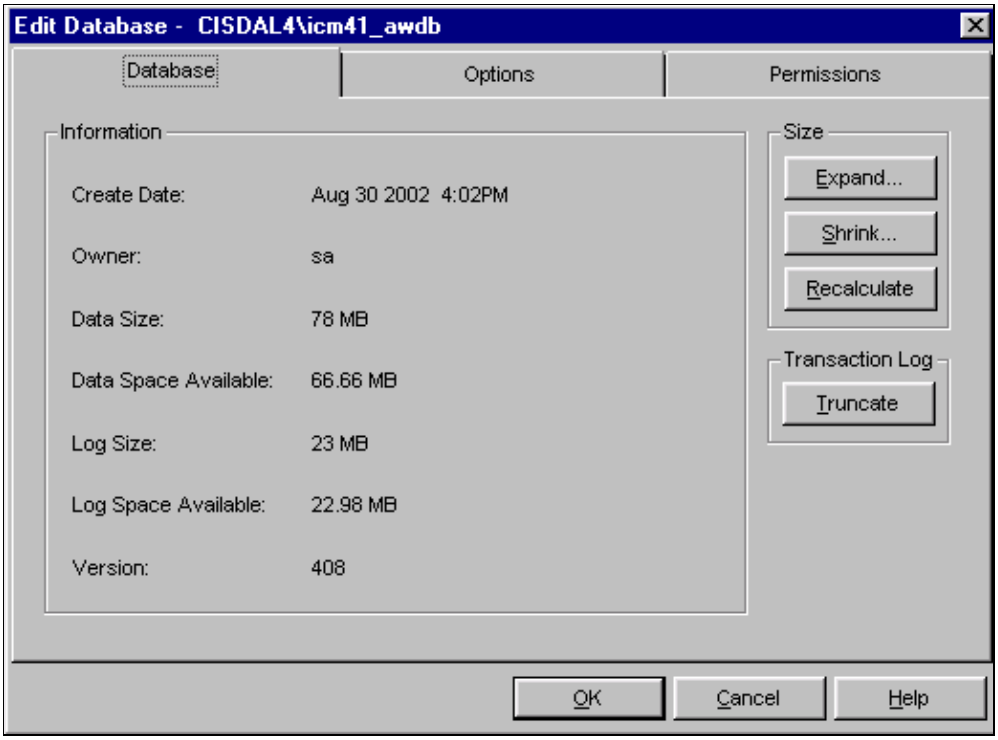
   Note: Register the server, if the server is not already registered.
3. Expand the Database Devices section.
4. Find the device you want to expand and right−click the device name.
5. Choose **Edit** from the pop−up menu.
6. Change the size to the new size (for example, from 500 MB to 1000 MB).
7. Click **Change Now**.

Now that the device is expanded or a new device is created, expand the database itself. Complete these steps:

1. Expand the Databases section in the Server Manager window.
2. Right−click the database to be expanded.
3. Choose **Edit** from the pop−up menu.

   The Edit Database dialog box opens.

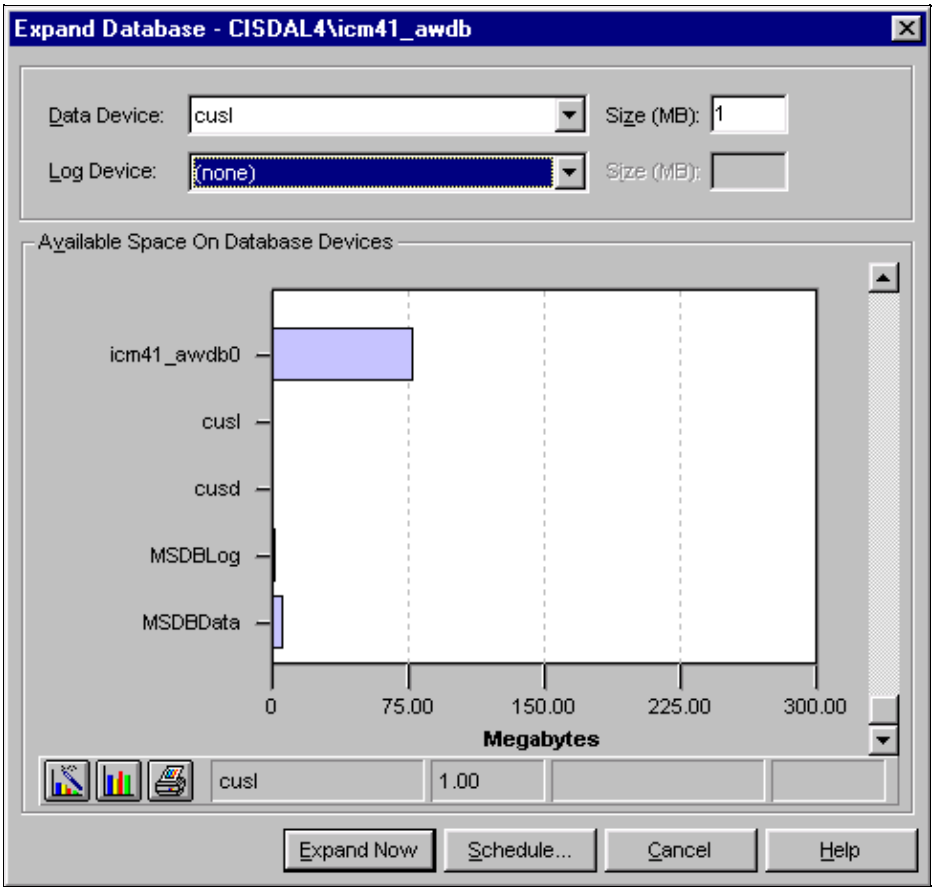
   Figure 6 Edit Database



4. Click **Expand**.

   The Expand Database dialog box opens.

Figure 7 Expand Database



5. Choose the device you just expanded or created in the appropriate menu (Data Device or Log Device).

6. Enter the amount of new space you wish to expand for this database in the Size (MB) field.

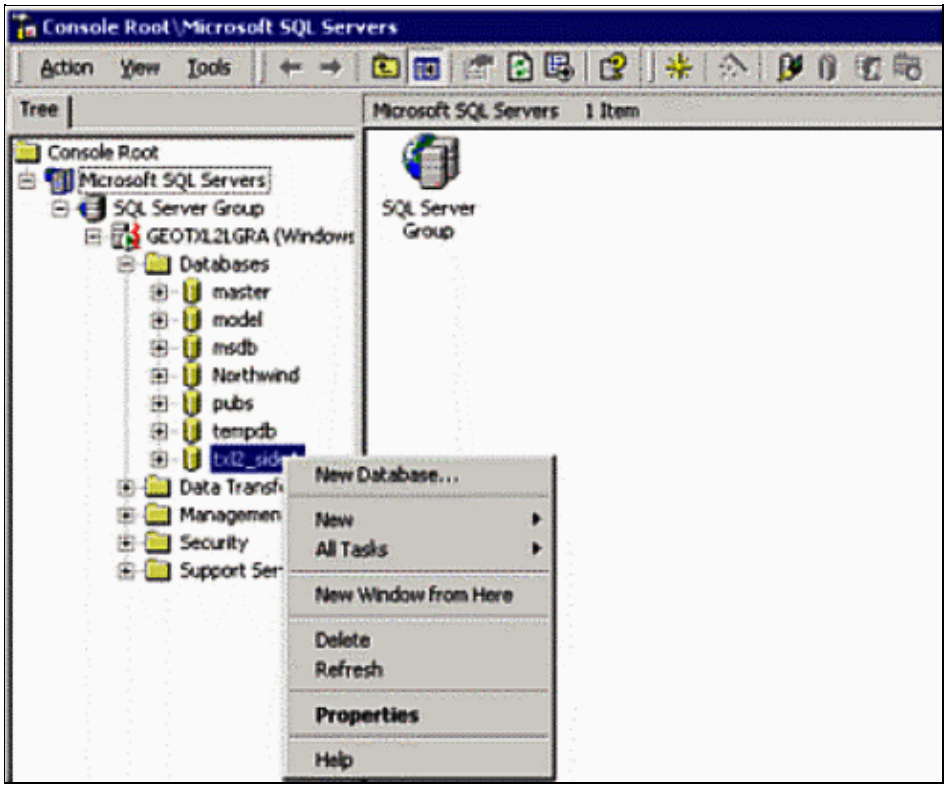
   Note: Most likely, all of the available space is used.
7. Click **Expand Now**.

SQL Server 7.0 and SQL Server 2000

Complete these steps in order to expand a database that exists from the Console Tree:

1. Navigate to the Databases folder for your server.
2. Double−click the database, or right−click the database and choose **Properties** from the pop−up menu in order to modify.

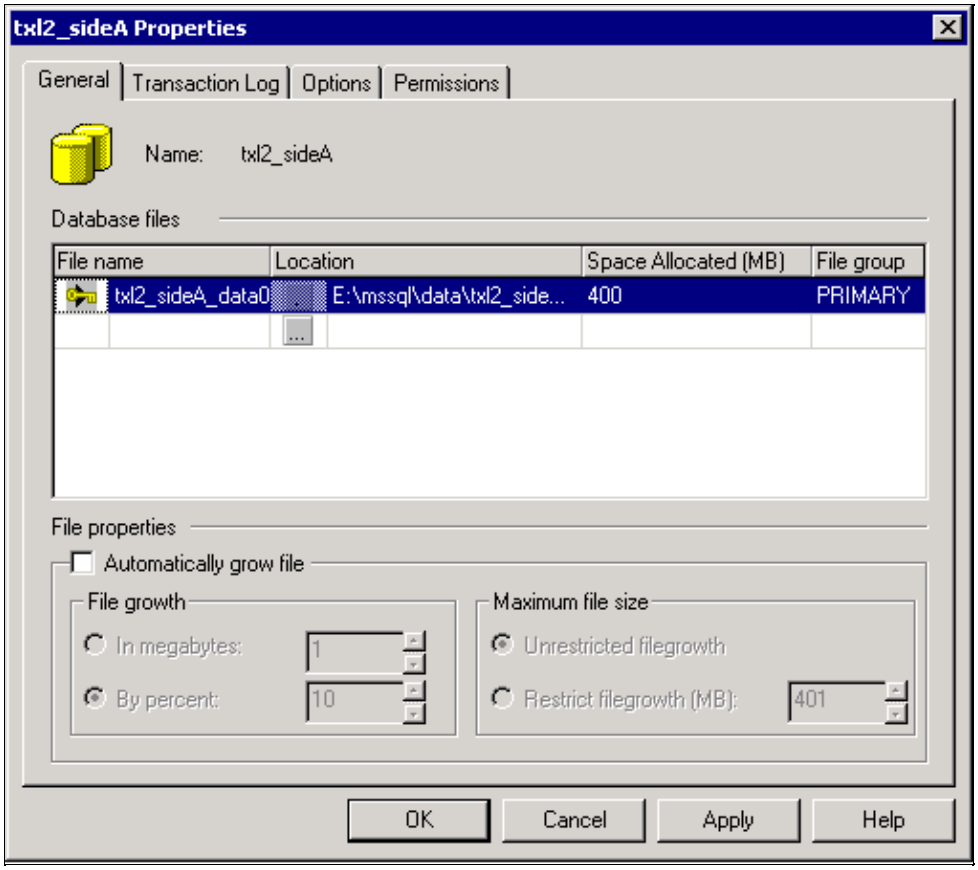
Figure 8 Console Root



The Properties dialog box for the selected database opens.

3. Click the **General** tab to increase the size of the data files for the database, or click the **Transaction Logs** tab to expand the size of the transaction log files for the database.
4. Adjust the Space Allocated, as needed, and click **Apply** to commit the changes.

Figure 9 Properties



Note: ICM version 4.6.2 and earlier do NOT support the Automatic File Growth feature of SQL Server 7.0. This feature should be disabled for both data and transaction log files. Uncheck the **Automatically grow file** check box to disable this feature.

If there is insufficient disk space to expand existing data and transaction log files, a new disk drive can be added to the server, and new data or transaction log files can be created for the selected database on the new disk drive.

Complete these steps in order to create a new data or transaction log file:

1. Click the appropriate tab in the Properties dialog box.
2. Click the blank line under the file listings that exist, and enter the File name, Location, and Space Allocated (MB) for the new file.
3. Click **Apply** to commit the changes.

Other than the assign a file name and location step, the procedures on how to expand a file and create a new file are the same.

Complete these steps in order to expand space when you use data or a transaction log file that exist:

1. Launch the SQL Enterprise Manager.
2. Navigate to the Databases folder for your server in the Console Tree.

   Note: Register the server, if the server is not already registered.
3. Right−click the database you want to expand.
4. Choose **Properties** from the pop−up menu.
5. Click either the General tab to expand a data file, or click the Transaction Log tab to expand a transaction log file.
6. Adjust the Space Allocated (MB) setting to the new size (for example, from 500 MB to 1000 MB).

7. Click **Apply** to commit the changes.

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