



**Description:** MSDE new Database Manager support for version 8.0 for Genesis32 and BizViz products.

**OS Requirement:** Windows 2000 or higher

**General Requirement:** Knowledge of databases, MS SQL and MSDE database.

## MSDE Manager for V 8.0

This application note addresses the new MSDE manager supplied with version 8.0. To start the new MSDE manager use the Genesis32\Tools\MSDE Database Manager link from the Programs group. If BizViz version 8.0 is installed, the MSDE Database Manager will also have a link under the corresponding Tools program group

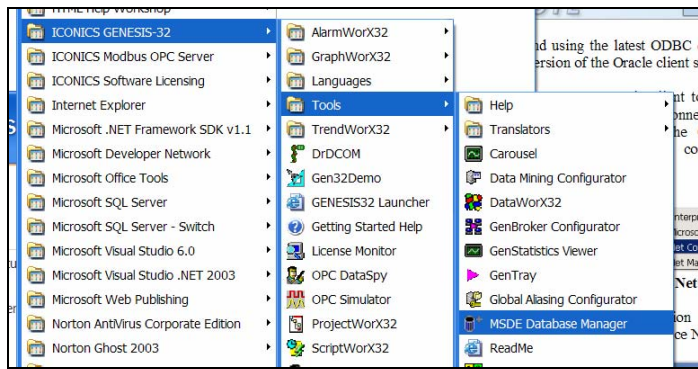


Figure 1: Starting the new MSDE Database Manager

Although the new MSDE Database Manager adds an array of new features for managing MSDE databases, the user may need to verify and – if needed – modify the default setting of the created MSDE databases for proper system operation. In this application note we will show how this can be done via simple scripts. The user should always login to the system with administrative privileges for the database scripts to work successfully.

## Creating a New Database

The new MSDE manager makes easy to create a new MSDE database for usage within the Iconics products. However, special attention must be given to the following items to ensure good performance when using MSDE databases:

- The initial size of the MSDE database should be made reasonable enough to avoid continuous on-line database expansions at data logging start-up. Although MSDE has a capability to increase the database size on the fly, as more data are logged, it is always a good idea to allow for a reasonably large initial size. Sometimes setting an initial size close to the total estimated size may also be a good idea.

- The user should verify that the Recovery mode of the newly created database is set to **Simple**, otherwise the transaction log could continuously be increasing. This is equivalent to setting the Truncate on Checkpoint option on.
- The growth options of the database may need adjustment to allow database growth by a percentage (ie 10%) or by size (ie 120 MB).
- If very frequent logging is taking place, it may be preferred to set the Auto shrink mode OFF

To create a new database, start the MSDE Database Manager and right-mouse click on the Databases node to Create a New database. The script window will appear:

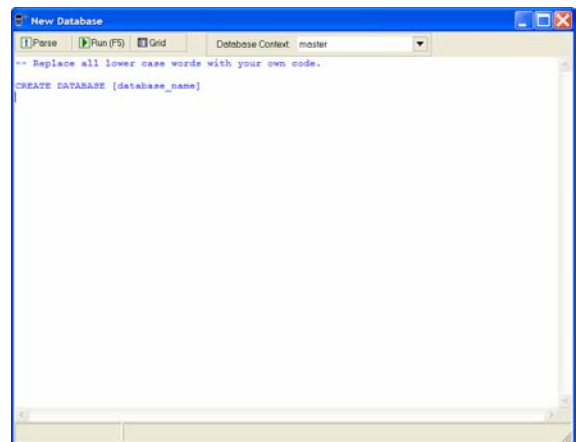


Figure 2: Database script creation dialog

By default the database creation script is

```
CREATE DATABASE [database_name]
```

where [database\_name] is the user desired database name. This will create a database with the default options, under the default MSDE database folder (typically under \Microsoft SQL Server\MSSQL\Data). The following script

```
CREATE DATABASE [MyTest] ON (NAME = N'MyTest_Data', FILENAME = N'C:\Historical Data\MS SQL Server\MyTest_Data.MDF', SIZE = 48, FILEGROWTH = 10%) LOG ON (NAME = N'MyTest_Log', FILENAME = N'C:\Historical Data\MS SQL Server\MyTest_Log.LDF', SIZE = 6, FILEGROWTH = 10%)
```

creates a new database with more user set options. Clicking on the Run menu, the script will create a database with a specified file location (the location should be valid), initial database size and growth options. To verify that the newly created database Recovery mode is set to Simple, which is equivalent to setting



the Truncate on checkpoint option ON, bring up the script window as before and use the script

```
exec sp_dboption N'MyTest', N'trunc. log'
```

The result will be immediately displayed upon clicking on the Run button

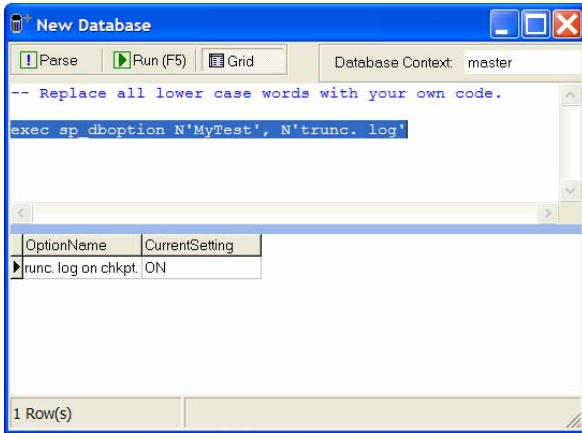


Figure 3: Verifying database options

The script to turn this option on is

```
exec sp_dboption N'MyTest', N'trunc. log', N'true'
```

Please note that if the script is run without the last parameter, it simply returns the set or running value for the option. Here are some similar scripts, which may be useful:

```
exec sp_dboption N'MyTest', N'autoshrink', N'false'
```

```
exec sp_dboption N'MyTest', N'auto create statistics', N'true'
```

```
exec sp_dboption N'RWXTest', N'auto update statistics', N'true'
```

The user can also run scripts to modify the database file growth properties. The following script will

```
ALTER DATABASE MyTest
MODIFY FILE
(
  NAME = N'MyTest_Data' ,
  MAXSIZE = 100MB,
  FILEGROWTH = 5MB
)
```

alter the created database properties and it will set its maximum file size to 100MB, and the growth options to 5 MB. The script

```
ALTER DATABASE MyTest
MODIFY FILE
(
  NAME = N'MyTest_Data' ,
  MAXSIZE = 100MB,
  FILEGROWTH = 10%
)
```

performs as previously, but it will now set the growth options to be 10% of the current database size.

### Adjusting MSDE Server Parameters

The MSDE database server has a sophisticated memory management system to maintain high performance levels. The user may have to adjust the server memory parameters to ensure proper system operation. In a typical application:

- The MSDE database server in general should not be allowed to use more than 2/3 of the total physical Ram present in the system. By default, the MSDE database server will utilize the entire installed physical Ram on a per need basis. If other applications request more memory resources from Windows, it will start releasing memory resources.
- Due to memory management of the MSDE database server, it is a good idea to verify that the system has enough virtual (paging file memory). A size of 4GB may be a good approach.

To be able to access MSDE database server memory parameters, the user must be able to see all Advanced configuration parameters. Using the following script can do this:

```
exec sp_configure N'show advanced options', 1
```

The user will need to run the reconfigure command immediately after the previous script

#### RECONFIGURE

To verify all options available for modification, the user can run the following script, which will result in a display of all accessible MSDE database server options

```
exec sp_configure
```

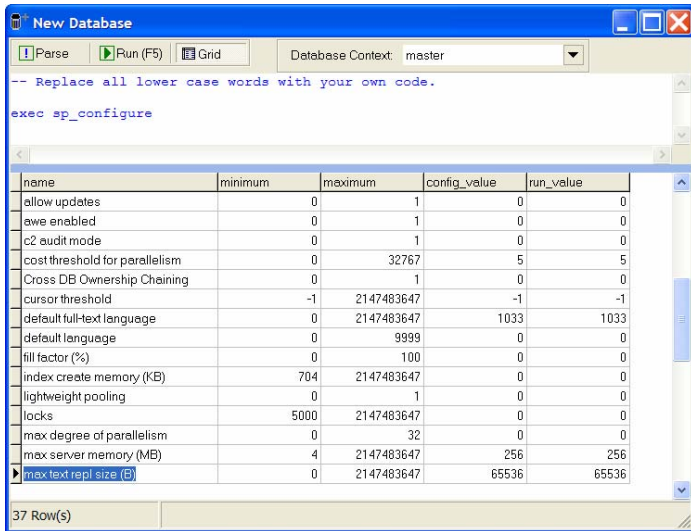


Figure 4: Displaying MSDE database server options

The following script

```
exec sp_configure N'max server memory (MB)'
```

will query for the maximum memory configured for the MSDE database server to use. The following script will set its maximum memory value to 256 MB:

```
exec sp_configure N'max server memory (MB) ', 256
```

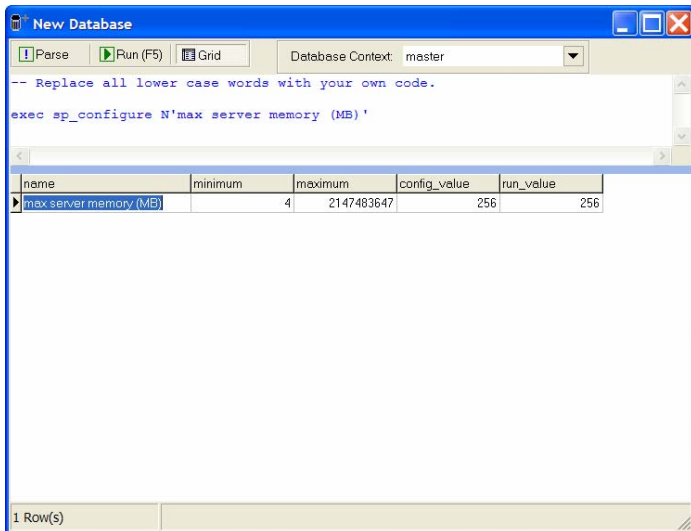


Figure 5: Adjusting database server memory options

Note that the new settings will take effect after the MSDE database server is restarted or the system is rebooted or the

### RECONFIGURE

Command is run through the script window

The following script will set its minimum memory value to 32 MB:

```
exec sp_configure N'min server memory (MB) ', 32
```

In addition, once all the advanced memory settings are set, it may be preferable to turn Advanced option accessibility of by running the script:

```
exec sp_configure N'show advanced options', 0
```

The user will need to run the reconfigure command immediately after the previous script

### RECONFIGURE

Note, the N' should be in CAPITAL letter only.