

Introduction

This document is intended to describe the process of backing up and restoring data stored in GMS 5.

Hint: Any text you see formatted like this in blue is geeky and can probably be ignored if you don't understand it.

GMS 5 has built-in backup and restore tools. Unlike previous versions of GMS, you do not need to exit GMS or have no other users in GMS in order to make a successful backup.

When backing up data in SQL Server 2000, MySQL or Paradox format, changes made by other users during the backup may be partially or completely included in the backup. For NexusDB and Oracle databases, the backup is a “snapshot” - a picture of the database at the instant the backup is started. Changes made by any other users during the backup process will not be included at all.

Backup

When GMS makes a backup, it takes all of the important data in your database and compacts it into a single file. This file can then be archived to tape, CD-R, DVD, or any other appropriate medium. It's important that you don't simply back up your data from GMS onto the same hard drive as the data itself is stored: while you're protected against accidental changes, if that hard drive or computer fails, you have no way of recovering the data. Once you've made a GMS backup, take that file and put it someplace safe, preferably not in the same office.

To make a GMS backup, start GMS normally until you get to GMS' main screen. Click on the “Tools” menu item, then “Back up your data”.

You will get a screen that looks like Illustration 2, Select tables for backup. Under “Backup file to create”, name the file that GMS will create. This can be on any drive on your machine that you are able to write to. (Generally you cannot write directly to CD, DVD or tape drives directly – you use special programs to do this. If you want to write your backup to a CD, DVD or tape drive, first save this backup to your hard drive and then use the appropriate software to write it to CD, DVD or tape.)

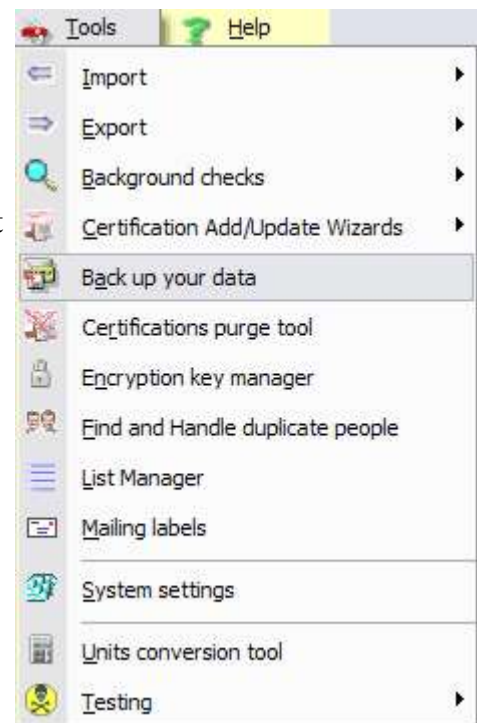


Illustration 1, Selecting the backup tool

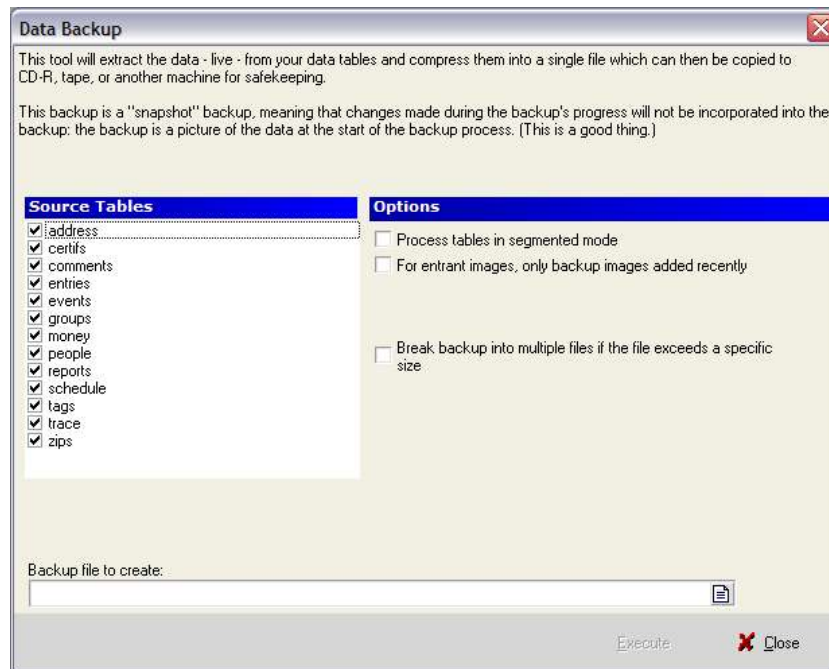


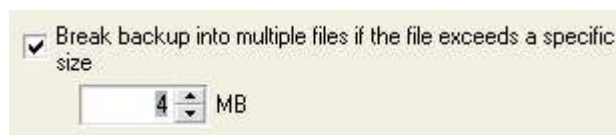
Illustration 2, Select tables for backup

After you've entered a filename, click on the [Execute] button. GMS will take some time backing up each individual file, compressing the files, and then storing them in a .zip file.

While the backup file which GMS makes is a standard .zip file, the files themselves are encrypted and cannot be opened. GMS does this because the NexusDB files that it makes as part of a backup have no index files, and trying to use them without restoring them in the normal way would cause errors.)

If you have a large number of stored entrant images and do not want to back them up every time, click on “For entrant images, only backup images added recently”. Enter the oldest image that you want included in the backup. Note that there is no standard way of merging two databases if you need to restore a backup of partial images. (GMS 5.2.0.5 and higher)

In order to fit your backup files onto small media, or to make the files small enough to send by e-mail, you can check the “Break backup into multiple files if the file exceeds a specific size” box (GMS 5.2.0.18 or higher). This will bring up an editor for defining how big is too big:



If checked, GMS will make as many backup files as necessary, making each file 4MB or smaller. There will be one file with a “.zip” extension, and zero or more files with extensions like “.Z001”, “.Z002”, etc. *You will need all of these files to successfully restore the backup.*

GMS 5.2.0.18 or higher is required to restore a backup which spans multiple files.

Restore

Before restoring a GMS backup, it is important that:

1. No one else be accessing the GMS database you want to restore into, and
2. You are very sure that you want to overwrite your existing data. GMS' security features are not active at this point, because these are dependent on GMS having access to the data. This means that it's possible for unauthorized users – if they have database rights to drop tables – to destroy your database.

If GMS normally does not start with a screen like Illustration 3, Select database, exit GMS. Then, when starting GMS, hold down the left [Ctrl] key – this will bring up the screen like Illustration 3, Select database.

Select the database you want to restore your data into. Click on the [Tools] button and then “Restore from a backup to this database”.



Illustration 3, Select database

Now enter the filename of the backup that you want to restore. You can click on the little disk icon to the right to bring up an Explorer window which can help you find your backup file.

Put a checkbox next to each of the tables that you want to restore. Normally you'll select all tables, but there are circumstances under which only some would be restored.

Click on the [Execute] button to restore your data.

Remember that if you had GMS break your backup into multiple files, all of these files must be present in the same folder as the “.zip” file in order to successfully restore the backup.

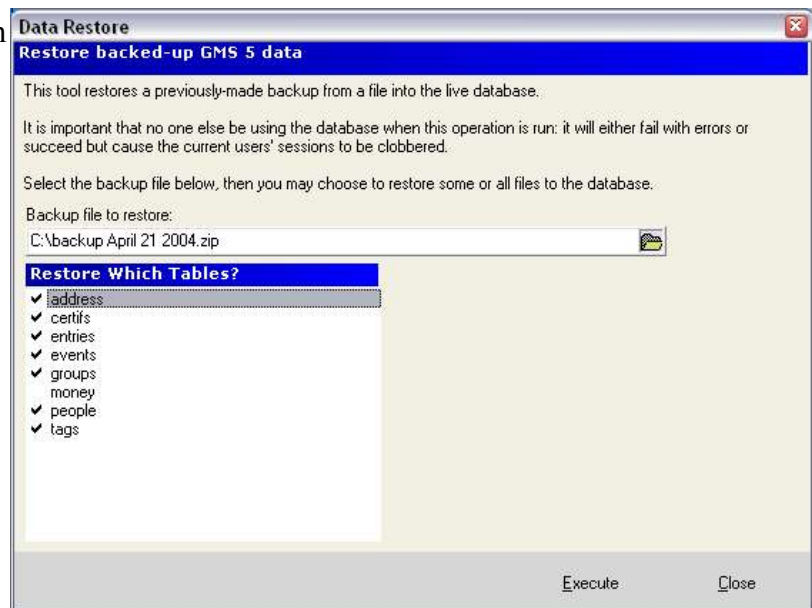


Illustration 4, Restore tables

Encrypted backups

By default, GMS backups are encrypted with a trivial internal password, primarily to prevent the accidental direct overwrite of data files with backup files. Because some overly-paranoid mail systems will block encrypted .zip files, 5.2.0.73 adds an option to have GMS not encrypt its backups.

In the GMS5.ini file, under the database for which you want backups to not be encrypted, enter the line:
`opt:noencryptbackups=Y`

Segmented backups (GMS 5.2.0.13 and higher)

On SQL Server databases with a large number of BLOB records, the SQL Server client may take a very long time if it runs backups by selecting all records in a single pass. To get around it, GMS can execute “segmented backups” - GMS will query only a section of a table at a time, resulting in smaller result sets.

(Versions of GMS prior to 5.2.0.51 would require this option when backing up large SQL Server tables in order to avoid “Not enough storage is available to process this command” errors; the option now only remains in order speed up the backup process in some circumstances.)

Normally GMS will enable this type of backup only for SQL Server databases. To enable them on other databases, put the line

```
SegmentedBackups=1
```

within that connection's section of the GMS5.ini file.

GMS will default to breaking each segmented table into nine segments. This can be changed by entering a value like

```
SegmentedBackupChunks=36
```

into a connection's section of the GMS5.ini file. This example will result in 36 queries being run, combined back into the single backup file. It may take experimentation with your own installation to determine the proper value to use. (Values less than one will result in a single segment; values greater than 36 will result in 36 segments.)