

Servicing your Legrand CRM SQL database

Overview

The SQL database is the heart of Legrand CRM and to get the best performance and reliability out of your system it is important that it is maintained. In version 6.5 this becomes even more important due to the increased usage of the database to store items that were previously held in the common folder. We have recently assisted some customers in tuning their database installations with significant results, and realise that many others could benefit from the insights gained in this process. This article documents some recommendations for simple changes to database setup that we encourage all customers to implement.

The problem

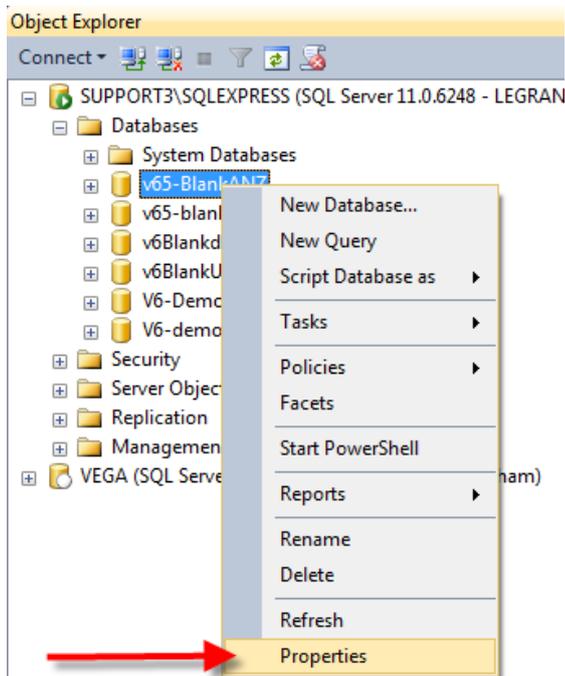
When a database is first created it is set to have an initial size, and also has a setting that defines how much the system should grow it by if & when it fills up – this is referred to as ‘auto-growth’. Auto-growth is a resource-intensive process and the whole system will slow down if it becomes necessary. In large companies with dedicated IT departments there is usually at least one specialist whose main role is to monitor all the company databases, ensure they are not approaching their size limit and to manually grow any that are, in after-hours maintenance, to ensure as much as possible that an auto-growth event never impacts in work hours.

This is clearly not practical for small businesses who do not have the luxury of dedicated IT staff and so default settings are used to mitigate the impact by setting values that ensure auto-growth events are infrequent.

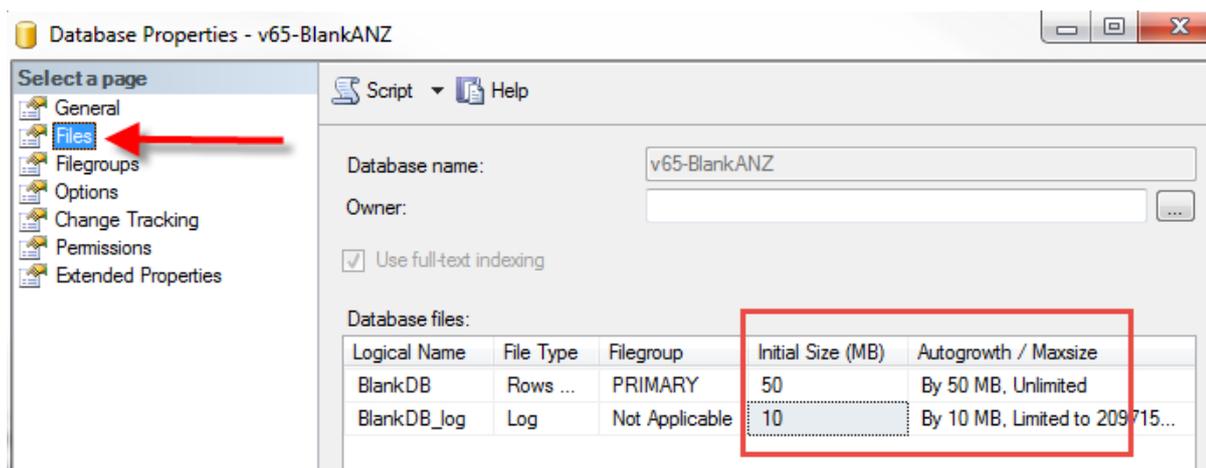
We install fresh Legrand CRM databases with initial file sizes and auto-growth increments that provide suitable values for a small to medium installation. However, older databases that have been upgraded to v6.5 will not have these settings, and large installations with many users or heavy storage requirements will likely need larger values. The older defaults are not suitable in most cases for a v6.5 system and may result in frequent auto-growth which impacts on performance – in extreme cases this can become severe and cause the desktop client software to crash due to not receiving a response from the SQL server.

The solution

We strongly recommend that all our customers check the size of their existing database and, in particular, the auto-growth increment. This can be done in SQL Server Management Studio which is normally installed on the machine where your SQL database is held. In there you will see a list of databases, right click on your Legrand CRM database and select properties from the dropdown...



...when the properties window opens, select files...



The values shown above are the default settings on our new databases – this should be taken as a minimum value and if you have plenty of free disk space much larger values can be set. These settings are adequate for small to medium installations of Legrand CRM, with up to ten users, and where large numbers of documents are **not** stored in the database.

You may find that your database is already significantly larger than this, as in this example from a customer's installation...

Database files:						
Logical Name	File Type	Filegroup	Initial Size (MB)	Autogrowth / Max Size	...	Path
BlankDB	Rows ...	PRIMARY	2704	By 1 MB, Unlimited	...	C:\SQL_Data
BlankDB_log	Log	Not Applicable	103	By 10 percent, Limited to 209...	...	C:\SQL_Data

Not good!

Notice that this database has grown to 2.7Gb in size, and will have done so 1Mb at a time – this means it will have auto-grown over 2 500 times! In this example we recommended setting the data file size to 4 096 Mb and an auto-growth increment of 100 Mb or more. Log file settings are less critical but a size of 200 Mb and 20Mb increments were implemented.

Once this initial change is in place you should also check regularly as to how full your database is and adjust the size at regular intervals as it grows, with a view to eliminating auto-growth events. However, if this is not possible then the recommended default settings should provide protection from severe performance degradation.

Finally, please note that the free edition of SQL (SQL Express Edition) has a hard limit of 10Gb on database data file size. In order to support larger data files you must implement a paid edition such as SQL 2014 Web edition or higher.

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