

Re: SQL 2005 Best Practice vs SQL 2000: Application Files Separate from data (and log) files

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Source:

<http://www.tech-archive.net/Archive/SQL-Server/microsoft.public.sqlserver.setup/2008-02/msg00049.html>

- *From:* Ekrem Önsoy <ekrem@xxxxxxxxxxxxx>
 - *Date:* Thu, 7 Feb 2008 19:07:37 +0200
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Some SQL Server 2005 binaries have to be installed to the "X:\Program Files\Microsoft SQL Server..." path by design. You can't change it. However, you have chance to change some other stuff's paths by clicking the "Advanced..." button in the "Components to Install" window in SQL Server 2005 Setup.

According to the database files, you can create your database files on different disks: see the following example:

```
CREATE DATABASE [test] ON PRIMARY
( NAME = N'test', FILENAME = N'D:\Data Files\test.mdf' , SIZE = 3072KB , FILEGROWTH = 1024KB )
LOG ON
( NAME = N'test_log', FILENAME = N'E:\Log Files\test_log.ldf' , SIZE = 1024KB , FILEGROWTH = 10%)
GO
```

And you can change your existing databases' files' locations using ALTER DATABASE

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Ekrem Önsoy

"Rex Gibson" <noamt1@xxxxxxxxxx> wrote in message
news:%23PnRU8ZaIHA.5160@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx

#1) Makes sense.

#2) I am still not seeing it clearly. In 2005 I appear not to be given the choice to install sql server binaries of the SQL Server on C drive, it appears that I am not given the choice to install system databases/log files on a separate drive, as I could in 2000. So I must move them post installation if I am to gain the performance advantage of having the binaries on the OS drive and System DBs (and log files – excepting temp) on the data drive (in the example below D:) and User DBs Data on D: and Logs on E:

Any thoughts Ekrem?

Anybody else have input?

"Ekrem Önsoy" <ekrem@xxxxxxxxxxxxx> wrote in message
news:00AnliRZIHA.5980@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Hello Rex,

1) You'll not be using most of the system databases (the temp db is an exceptional database in certain cases when you use it extensively for your application) intensively so you don't need to separate them, I mean locating them on different physical disks. As I told you, temp db is an exceptional system database. If it's being used intensively in your environment then you should locate its log and data files on different physical disks. But for the master, model and msdb you don't have to separate them as they are not going to be used intensively (at least for most of the cases). However you should back up them when you make a change in server level, this is one of the best practices.

2) For this question you must understand the reason why we should separate data and log files. We separate data and log files to gain write and read (shortly I/O) performance. The best practice is to install the binaries of the OS and SQL Server on the C: drive (because they are not going to be used intensively) and locate the data file of the database on the D: drive and locate the Transaction Log file on the E: drive. Of course these drives must be physically separated so that you'll gain performance benefits. Logically separation does not mean anything in terms of performance advantage.

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Ekrem Önsoy

"Rex Gibson" <noamt1@xxxxxxxx> wrote in message
news:OUhBAPRZIHA.3964@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

Thank you Ekrem,

We are physically separating log and data files on separate disks. So after thinking about it in need to rephrase the question into 2 parts.

For SQL Server 2005:

1) In addition to separating data files and log files to separate physical for "user" databases, is it best also practice to separate out the data and log files to different physical volumes for system databases such as master, msdb, and tempdb? In which case this cannot be done via the setup.exe but must be done post installation using the following techniques.

<http://support.microsoft.com/kb/224071>

Correct?

2) In a server configuration with 3 physical volumes, for example: C: for system (local RAID), D: for data (SAN), E: for logs (SAN); is there any reason to have the application files and folders on the C drive and the data files on the D: drive and logs on the E: drive? By application files I mean the binn folder which contains the sql server executable among other things. Does it matter? Or can simply install

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SQL Server on D drive, and do as advised in question 1 above with regards to user and system db log files.

Thanks again for your kind attention.
-Rex

"Ekrem Önsoy" <ekrem@xxxxxxxxxxxx> wrote in message
news:E5D91BBB-241D-4709-871D-4F6A77385B40@xxxxxxxxxxxxxxxxxxxx

There was another post similar to yours by Saral6978 just 1 post before yours.

Separation of data and log files is a best practice. For example, locate your SQL binary and Windows files on drive C: and put your data file on drive D: and put the log file of your database on drive E:

The important thing here is putting those files physically separated disks. A logical separation would not gain you performance.

You can of course change your database files' folders using ALTER DATABASE command in SQL Server 2005 as well. To learn more about this command visit Books Online =
<http://msdn2.microsoft.com/en-us/library/ms174269.aspx>

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Ekrem Önsoy

"Rex Gibson" <noamt1@xxxxxxxx> wrote in message
news:e%23DcqK5YIHA.4896@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

Dear readers,
I am finally coming out of the dark ages and starting to use SQL Server 2005. Due to the rather large nature of my organization, you must forgive me for the rather late question.

I have operated in SQL 2000 under the assumption that a performance boost is gained when the SQL Server Application files (such

as the server service executable, and agent service executable) were on separate volumes/luns from the data files. Thus Application files were installed on C. Data files on D and log files on E. Etc.

Now we are starting to move forward and use SQL2005 sp2 and during installation, it appears we no longer have the same options (or possibly we just don't understand). It appears that the SQL 2005 installation package does not allow for this type of configuration in regards particularly to the application files being on a separate location from the data files. We have tried a few ways now and done several searches and are not finding any reference material on that through we are seeing vague references that the same "best practice" applies in 2005.

What I want is the binn folder on the c drive and the system db's on the d drive. Obviously I can get the user dbs on the d drive. Is this possible? Is it still a best practice? If not, why not? Anybody have a link to a guide on how to do this? Proving me wrong in the first place (This practice in SQL2000) is an acceptable solution too.

Thank you for your kind attention!
-Rex Gibson
DBA --- in some very large, very slow moving

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organization.