Bookmark Fact Sheet

Changing the Database System

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Bookmark and Database Systems

Bookmark uses a database system (DBS) to handle saving, searching, and retrieving data.

SQLite is built into every executable module. It is an excellent DBS for use with a single computer or small network.

If your Bookmark system is on a network, and is running slow or frequently freezes or crashes, changing the database system may help. Bookmark can work with three other DBS that are designed for use on large networks with many concurrent users.

Changing the database system does not alter any on-screen activities, except backup and restore. Users will not see any difference.

Due to their complexity, it is recommended the alternate database system be installed by an IT technician.

Bookmark setup for Single Computer Use

If Bookmark is used on only one workstation but hosted on a server, it is strongly recommended to shift it onto the C: drive of the workstation. There is no gain or advantage having a single workstation using Bookmark based on a network server, and there can be definite loss of performance and stability. Operation on the local drive is fast and reliable. Bookmark has an excellent backup system that library staff can use easily and quickly. It can also be automated. Make sure the AV/security system is set to exclude the Bookmark folder.

If Bookmark is on a network and is operating quickly, stick with SQLite. Only change if performance or stability is an issue.

For the other DBS, Bookmark remains installed in a folder on the host / server. Nothing needs to be changed with the way Bookmark is set up. Workstations remain linked via mapped drive letters and desktop icons. No software is installed on workstations. Bookmark is simply re-configured to use the alternate DBS. All workstations then use the same configuration.

Each DBS has a separate fact sheet that describes downloading, installation, setup and configuration.

SQLite https://en.wikipedia.org/wiki/SQLite

- The standard DBS for Bookmark.
- Fastest for single computer use.
- May be fastest for network use where only a few workstations are involved.
- No installation or setup required.
- On networks, workstations see the host as a drive. All processing is done in the workstation's memory. No processing is done on the host/server. Bottlenecks on a network can impact on performance and stability.

MariaDB https://en.wikipedia.org/wiki/MariaDB

- Client/Server DBS designed for large network use.
- Free.
- Can be faster on networks than the others.
- Easiest of the lot to install and set up.
- No setup required on workstations.
- Can co-exist with another DBS on the same server.
- Code-compatible with MySQL. (MySQL can be used with Bookmark as well.)

PostgreSQL https://en.wikipedia.org/wiki/PostgreSQL

- Mature, long-standing heavy-duty client/server system designed for very large databases on large networks. Widely used on Linux systems, but Windows and Mac versions also exist.
- Free.
- Slower than MariaDB but can still be faster than SQLite on networks.
- Requires slight configuration after installation.
- No setup required on workstatons.
- Can co-exist with other DBS on the same server.

Microsoft SQL Server https://en.eikipedia.org/wiki/Microsoft_SQL_Server

- May incur a cost.
- Requires ODBC to be set up on every workstation.
- Speed varies with the version and network setup. Generally slower than Postgres and MariaDB.
- Complex installation. SQL Server Management Studio required.
- Does not hook into Bookmark's own backup system.
- SQLExpress is free but operates slower than SQL Server.

Allow an hour, but time to download, install, configure Bookmark and fully set up can be less than 30 minutes. Trials on a laptop took under 15 minutes.

Only one DBS can be used at a time. There is no provision to automatically save data to two different DBS. If using MariaDB, data is not also saved using SQLite.

Bookmark users who work at home will need to install the same DBS to be able to restore backups.

Bookmark can change from one system to another and back to SQLite.

Choosing an Alternate Database System

Consider changing Bookmark to use a DBS other than SQLite if:

- Operation is slow
- Using two or more workstations at the same time slows everyone down
- Bookmark frequently crashes, hangs, or plays up at random.

SQLite is the easiest to use. It is the fastest on a single computer. If Bookmark is running smoothly and quickly – even on a network – staying with it is recommended.

MariaDB is easier to set up than the others and faster.

PostgreSQL is installed similar to MariaDB, but it does require some alteration of a configuration file. Speed is a bit slower.

SQLServer can be used where technical knowledge or experience may already exist, or it may already be installed on a server. It is not necessarily the fastest DBS. ODBC must be set up on every PC that uses Bookmark.

Bookmark must be installed on the same PC as the DBS. It can be a server or a workstation acting as a host. No software is installed on workstations. Workstations have a mapped drive back to the Bookmark folder and a shortcut icon on the desktop.

These fact sheets cover downloading, installation, and setup.

MariaDB: https://bookmark.central.sa.edu.au/website/docs/FSMariaDBSetup.pdf

PostgreSQL: https://bookmark.central.sa.edu.au/website/docs/FSPostgresSetup.pdf

SQL Server: https://bookmark.central.sa.edu.au/website/docs/FSMS-SQLSetup.pdf