

# **Laserfiche<sup>®</sup> Repositories: Architecture and Terminology**

*White Paper*

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**Laserfiche<sup>®</sup>**

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## Repository Architecture

A Laserfiche repository consists of three parts:

- The database, which contains the metadata for the repository.
- The volumes, which contain files that are scanned or imported into Laserfiche.
- The search/index files.

There are also two servers involved in a Laserfiche installation:

- The Laserfiche Server, which manages the volumes and search files.
- The SQL Server, which is managed by the Database Management System, which handles the database.

In addition, some products also have an application server, the Internet Information Services server. This may or may not be on the same machine as any of the others. This is the server that can be browsed to from the outside through products such as Weblink or Web Access.

Please note that the terms ‘database,’ ‘volume’ and ‘repository’ are not interchangeable. The repository encompasses both the database and the volumes, plus the search index files. The database contains the metadata for the repository, but not the files themselves. The volumes contain the files themselves, but, unless they are exported from Laserfiche, not the metadata. The database is handled by the DBMS, whereas the repository is handled by Laserfiche.

## Repository Terminology

Italics indicate that a particular term or phrase has an entry of its own. Please note that this terminology is specific to Laserfiche 7. In many cases, the terminology is the same as for previous versions, but some definitions have changed.

**Attaching a Database:** *Databases* are attached to the *Database Management System*. When a database has been attached, the DBMS can access the information within the database files. Databases must be attached before they can be used within a Laserfiche repository. In some cases, the Laserfiche Repository Registration Wizard will handle attaching the database for you.

**Back-End:** The term ‘back-end’ is usually used to refer to the *database*, and/or the *Database Management System* that manages it.

**Database Management System (DBMS):** The Database Management System, or DBMS, There are three DBMS which are currently supported in Laserfiche:

- Microsoft SQL Server 2000 with service pack 3 (MSSQL)
- Microsoft SQL Server Desktop Engine with service pack 3A (MSDE)
- Oracle 9i Release 2 (9.2.0.6.0) or Oracle 10g
- Microsoft SQL Server, Oracle 9i Release 2 (9.2.0.6.0), or Oracle 10g

**Database:** The database is the part of the repository that handles the metadata. It is managed by the *Database Management System*, or DBMS. The database is a subset of the repository; the two terms are not synonymous. The database is contained in .mdf and .ldf files.

- **Expansion Database:** Laserfiche products using MSDE or MSSQL Personal Edition produce expansion databases as a means of maximizing the limited size of the database. These databases are created as the size of the Laserfiche repository and database grows, and are numbered sequentially. They are generally named DatabaseName\_Data\_n, where DatabaseName is the name of the main database and n is a sequential number, starting with one.

**DBMS:** See *Database Management System*.

**Detaching a Database:** Under certain circumstances – for instance, removal of a database from a particular machine, or manually copying database files – you may need to detach the *database* from the *Database Management System*. When a database has been detached, the information contained within it is no longer accessible; it will need to be attached before it can be used again.

**Metadata:** The metadata is the information contained in the *repository* apart from the image and text files and electronic documents contained in the *volumes*. For instance, users and groups, templates, document relationships, and security information are all metadata. This information is contained within the *database*.

**Registering a Repository:** *Repositories* are registered in the Laserfiche Administration Console. When a repository is registered, the *volumes*, *database*, and *search files* for that repository are all associated with one another and made available to Laserfiche. Once a database has been attached, the data and metadata can be accessed through Laserfiche Administration Console or Laserfiche Client.

**Repository:** The repository is the name for the collection of files that Laserfiche manages. This includes the *volume*, the *database*, and the *search files*. The repository is not synonymous with the database or the volumes and is not managed by the *Database Management System*. Instead, the repository encompasses both the volumes and the database.

**Schema:** A schema is a term specific to Oracle: it is a set of database files specific to a particular account. The *database* which will be used with Laserfiche is contained within a particular Oracle user schema, which must be created in Oracle and then specified at *repository* creation.

**Search Files:** The search files are the files generated by Laserfiche when files within the *repository* are indexed. The search files allow indexed documents to be efficiently searched.

**Unregistering a Repository:** If you want to remove a *repository* from Laserfiche, you must unregister it. Unregistering a repository stops the Laserfiche Server from broadcasting it to the Clients and to other applications such as WebLink or Web Access. The information in the repository will not be available through Laserfiche until it is registered again.

**Volume:** The volumes are the part of the repository which stores the image files, text files and electronic documents which Laserfiche is managing. Volumes come in two types: *logical volumes*, and *physical volumes*.

- **Physical Volume:** A physical volume is the location where documents are stored. These may be on hard drives or removable media.
- **Logical Volume:** A logical volume is a set of physical volumes, which have a maximum size restraint put on them. When the size has been reached, an event called rollover occurs and a new physical volume is created under the logical volume.



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